

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE:			
APPROPRIATION/BUDGET ACTIVITY								February 2006			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /						R-1 ITEM NOMENCLATURE					
BA-4						0603502N/Surface and Shallow Water Mine Countermeasure					
COST (\$ in Millions)	Prior Years Cost		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Total Program
Total PE Cost	892.118		97.892	118.682	130.265	131.401	127.034	194.089	246.993	Continuing	Continuing
Remote Minehunting System / 0260	327.153		17.278	0.000	5.816	0.000	0.000	27.028	33.418	Continuing	Continuing
Mine Counter Measures Mid-Life Upgrades / 1233	73.506		3.359	15.617	20.160	31.179	19.204	3.832	3.884	Continuing	Continuing
Unmanned Underwater Vehicle / 2094	300.966		58.745	53.805	42.224	56.773	60.020	108.618	160.047	Continuing	Continuing
Assault Breaching System / 2131	190.493		15.721	28.777	37.083	36.116	35.367	30.562	29.513	Continuing	Continuing
Low Frequency Broadband / 3102	0.000		0.000	9.702	0.000	0.000	0.000	0.000	0.000	0.000	9.702
SMCM UUV / 3123	0.000		0.000	1.047	11.222	7.333	12.443	24.049	20.131	Continuing	Continuing
Expendable Mine Neutralization System / 4025	0.000		1.825	8.334	13.760	0.000	0.000	0.000	0.000	0.000	23.919
BPAUV / 9513 *	0.000		0.964	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.964
9999 Congressional Add	0.000		0.000	1.400	0.000	0.000	0.000	0.000	0.000	0.000	1.400
Quantity of RDT&E Articles											0.000
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:											
<p>The program provides for developments to combat the threat of known and projected foreign mines against U.S. Naval and merchant shipping in harbors, channels, choke points, sea lines of communications and amphibious and other fleet operating areas. It develops: (1) organic remote minehunting capability for surface platforms; (2) the integration and improvement of systems and support for systems which will detect, localize, classify, and neutralize moored, bottom, and close-tethered mines for use in Mine Countermeasure (MCM) MCM-1 Class, Mine Hunter Coastal (MHC) MHC-51 Class, and other surface ships; (3) systems for neutralizing mines and light obstacles from shallow water, very shallow water, surf zones, and beach landing craft zones in support of amphibious operations; (4) Unmanned Undersea Vehicle (UUV) systems for clandestine mine reconnaissance.</p> <p>* Congressional plus-up of the Surface Navy Inegrated Undersea Tactical Technology (SNIUTT) will be used to develop AN/AQS-14, AN/AQS-24 and AN/AQS-20A sensor training module for a LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).</p> <p>* Congressional plus-up of the Battlespace Preparation Autonomous Undersea Vehicle (BPAUV) is an unmanned system capable of minehunting and oceanographic data gathering. The BPAUV will be launched and recovered from Littoral Combat Ship (LCS) Flight 0. The Congressional plus up supports development of two engineering development systems.</p>											
(U) B. JUSTIFICATION FOR BUDGET ACTIVITY:											
<p>This program is funded under DEMONSTRATION AND VALIDATION because it develops and integrates hardware for experimental testing related to specific ship or aircraft applications.</p>											

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EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM				PROJECT NUMBER AND NAME 0260 Remote Minehunting Systems					
COST (\$ in Millions)	Prior Years Cost		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 20010	FY 2011	Cost to Complete	Total Program
Project Cost	327.153		17.278	0.000	5.816	0.000	0.000	27.028	33.418	Continuing	Continuing
RDT&E Articles Qty	2		0	0							2
<p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>The AN/WLD-1(V)(1), Remote Minehunting System (RMS), consists of a diesel powered semi-submersible Remote Minehunting Vehicle (RMV) that tows a Variable Depth Sensor (VDS, AN/AQS-20A). It also includes shipboard equipment consisting of a command control combat system, launch and recovery system, radio antennas and support equipment. RMS will operate from the DDG-51 Class Flight IIA ships (DDG-91-96) and Littoral Combat Ships (LCS). The system determines the presence or absence of mines to an acceptable level of confidence to enable ships to operate in or avoid specific areas. Future funding will be used to begin development of emerging technologies for incorporation into the AN/WLD-1(V)(1) Remote Minehunting System and Littoral Combat Ship (LCS) Reconfigurable Mission Capabilities (Multi-Mission - MM).</p>											

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EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 0260 Remote Minehunting Systems		
<b>(U) B. Accomplishments/Planned Program</b>				
Product Development		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		11.275	0.000	5.316
RDT&E Articles Quantity				
<p>FY05 Accomplishments: Complete engineering and fabrication of Engineering Development Models (EDMs) for the RMS. Conduct Functional/Physical Configuration Audit and installation of Data Link Subsystem and Launch and Recovery Subsystem. Milestone C was approved on 1 July 2005 and program was authorized to procure up to three (3) LRIP units in FY05.</p> <p>FY07: Correct reliability issues.</p>				
Support		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		3.619	0.000	0.000
RDT&E Articles Quantity				
<p>FY05 Accomplishments: Complete software Design/Code/Test for the RMS. Continue Integrated Logistics Support (ILS) Planning and Integrated Electronic Technical Manual (IETM) Development for RMS. Continue Integration Support for the RMS .</p>				

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	0260 Remote Minehunting Systems		
<b>(U) B. Accomplishments/Planned Program</b>				
T&E		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		1.229	0.000	0.000
RDT&E Articles Quantity				
FY05 Accomplishments: Conducted Operational Assessment, SQT-I, and SQT-II.				
Management		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		1.155	0.000	0.500
RDT&E Articles Quantity				
FY05 Accomplishments: Funds provided for COMOPTEVFOR and Program Management Support and Travel.				
<b>TOTAL</b>		<b>17.278</b>	<b>0.000</b>	<b>5.816</b>

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APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-4</b>		R-1 ITEM NOMENCLATURE 0260 Remote Minehunting Systems																																				
<p><b>(U) C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"><thead><tr><th style="text-align: left; width: 40%;">(U) C. PROGRAM CHANGE SUMMARY:</th><th style="text-align: right; width: 15%;">FY 2005</th><th style="text-align: right; width: 15%;">FY 2006</th><th style="text-align: right; width: 15%;">FY 2007</th></tr></thead><tbody><tr><td>FY06 President's Budget</td><td style="text-align: right;">14.284</td><td style="text-align: right;">0.000</td><td style="text-align: right;">0.000</td></tr><tr><td>FY07 President's Budget</td><td style="text-align: right;">17.278</td><td style="text-align: right;">0.000</td><td style="text-align: right;">5.816</td></tr><tr><td>Total Adjustments</td><td style="text-align: right; border-top: 1px solid black;">2.994</td><td style="text-align: right; border-top: 1px solid black;">0.000</td><td style="text-align: right; border-top: 1px solid black;">5.816</td></tr><tr><td colspan="4" style="padding-top: 20px;">Summary of Adjustments:</td></tr><tr><td>Inflation</td><td style="text-align: right;">0.000</td><td style="text-align: right;">0.000</td><td style="text-align: right;">0.026</td></tr><tr><td>Pay Rates</td><td style="text-align: right;">0.000</td><td style="text-align: right;">0.000</td><td style="text-align: right;">0.008</td></tr><tr><td>Programmatic Changes</td><td style="text-align: right;">2.994</td><td style="text-align: right;">0.000</td><td style="text-align: right;">5.782</td></tr><tr><td>Subtotal</td><td style="text-align: right; border-top: 1px solid black;">2.994</td><td style="text-align: right; border-top: 1px solid black;">0.000</td><td style="text-align: right; border-top: 1px solid black;">5.816</td></tr></tbody></table> <p style="margin-top: 40px;">(U) Schedule: Conducted System Qualification Test (SQT) II in the 4th quarter FY05. Procurement in place for three (3) Low Rate Initial Production (LRIP) Remote Minehunting Vehicles (RMVs) units under N00024-05-C-6327 and one (1) Variable Depth Sensor (VDS) in FY05. Full rate production will start in FY06.</p> <p style="margin-top: 20px;">(U) Technical: Not Applicable</p>			(U) C. PROGRAM CHANGE SUMMARY:	FY 2005	FY 2006	FY 2007	FY06 President's Budget	14.284	0.000	0.000	FY07 President's Budget	17.278	0.000	5.816	Total Adjustments	2.994	0.000	5.816	Summary of Adjustments:				Inflation	0.000	0.000	0.026	Pay Rates	0.000	0.000	0.008	Programmatic Changes	2.994	0.000	5.782	Subtotal	2.994	0.000	5.816
(U) C. PROGRAM CHANGE SUMMARY:	FY 2005	FY 2006	FY 2007																																			
FY06 President's Budget	14.284	0.000	0.000																																			
FY07 President's Budget	17.278	0.000	5.816																																			
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EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2006</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDTE, N / BA-4</b>			PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM			PROJECT NUMBER AND NAME 0260 Remote Minehunting Systems			

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
P-1 #50 / OPN									
RMS	33.851	53.708	16.773						
Support	1.710	1.581	1.221						
Total	35.561	55.289	17.994						
 (U) RDTE, Line 0604373, 0529	 2.400	 3.369	 10.965						

**(U) E. ACQUISITION STRATEGY:**

The Navy has implemented an evolutionary strategy in developing AN/WLD-1(V)(1). The Navy developed the RMS(V)1/2, as a concept demonstration prototype. The follow-on effort for the RMS(V)3 focused on a prototype development, and was competitively awarded to Lockheed Martin in August 1996. The RMS(V)4, officially designated the AN/WLD-1(V)(1), is based upon RMS(V)3 design and was awarded as a sole source contract to Lockheed Martin in 2002. AN/WLD-1(V)(1) was approved for MS C on 1 July 2005. The program was authorized to procure up to three (3) LRIPs in FY05. A sole source letter contract N00024-05-C-6327 was awarded to Lockheed Martin on 30 September 2005 for FY05 LRIP, and FY06 and FY07 production. Full rate production decision is scheduled for 2nd quarter FY06. FY08 and out-year procurements will be procured under a competitive contract.

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**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)							DATE: February 2006							
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			0260 Remote Minehunting Systems								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Software Development	CPIF	Lockheed Martin	7.092									0.000	7.092	
Software Development	CPIF	Lockheed Martin	6.573			0.388	11/04					Continuing	Continuing	
Software Development	WX	NSWC, Panama City, FL	1.851			0.291	10/04					Continuing	Continuing	
ILS	CPIF	Lockheed Martin	5.682									0.000	5.682	
ILS	CPIF	Lockheed Martin	8.941			1.163	11/04					Continuing	Continuing	
ILS	WX	NSWC, Panama City, FL	1.783			0.291	10/04					Continuing	Continuing	
Ship Integration	CPIF	Lockheed Martin	1.258									0.000	1.258	
Ship Integration	CPIF	Lockheed Martin	2.490			0.388	11/04					0.000	2.878	
Ship Integration**	Various	Various	12.353			1.098	12/04					0.000	13.451	
					</									



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Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2006</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT 0603502N, Surface and Shallow Water MCM			PROJECT NUMBER AND NAME 0260 Remote Minehunting Systems								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	CPIF	Lockheed Martin	18.470									0.000	18.470	
Developmental Test & Evaluation	CPIF	Lockheed Martin	13.620			0.590	11/04					Continuing	Continuing	
Developmental Test & Evaluation	WX	NSWC, Panama City, FL	7.525			0.639	10/04					Continuing	Continuing	
Subtotal T&E			39.615			1.229		0.000		0.000		Continuing	Continuing	
Remarks:														
Contractor Engineering Support	CPIF	Lockheed Martin	2.919			0.780	11/04			0.300	11/06	Continuing	Continuing	
Government Engineering Support	WX	NSWC, Panama City, FL	22.393							0.100	11/06	Continuing	Continuing	
Program Management Support	CPFF	CACI	4.020			0.288	11/04			0.050	11/06	Continuing	Continuing	
Travel	Various	NAVSEA	0.351			0.087	Various			0.050	11/06	Continuing	Continuing	
SBIR Assessment	Various	Various	6.361											
Subtotal Management			36.044			1.155		0.000		0.500		Continuing	Continuing	
Remarks: Award dates for management are various because multiple activities are receiving tasks at different times during the fiscal year.														
Total Cost			327.153			17.278		0.000		5.816		Continuing	Continuing	
Remarks:														

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**Exhibit R-2, RDTEN Budget Item Justification**  
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EXHIBIT R-4, Schedule Profile																DATE:				February 2006											
APPROPRIATION/BUDGET ACTIVITY				PROGRAM ELEMENT NAME AND NUMBER								PROJECT NAME AND NUMBER																			
RDT&E, N/BA-4				0603502N, Surface & Shallow Water MCM								0260 Remote Minehunting Systems																			
AN/WLD-1(V)(1) PROGRAM SCHEDULE																															
				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestones				▲								△ △				IOC															
Events				MS C/LRIP								FRPD																			
Production Readiness Review								△				△				FY07 Option															
Production Options												LRIP Option				△				Production CA											
Production Competitive CA																															
Contract (N00024-02-C-6309)				■				EDM																							
Contract (N00024-05-C-6327)								LRIP (1-6)								Production (1-3)															
Contract (N00024-08-C-TBD)																Competitive Production Contract (4-36)															
Deliveries												△ △				2 EDMs 6 LRIPs															
N75 Deliveries												△																			
N76 Deliveries																															
Test & Evaluation				▲ ▲				DT/OT				DDG FOT&E				LCS OA				Prods Deliveries (N75 and N76)											
Operations and Maintenance Support								■																							

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Exhibit R-4a, Schedule Detail						DATE: February 2006		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&BA-4	0603502N, Surface & Shallow Water MCM				0260 Remote Minehunting Systems			
Schedule Profile: AN/WLD-1(V)(1)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Milestones:								
MC C/LRIP		3Q		1Q				
FRPD				3Q				
IOC				4Q				
Events:								
Production Readiness Review			4Q					
Production Options				1Q-3Q				
Production Competitive CA					2Q			
Contract (N00024-02-C-6309):								
EDM		1Q-4Q	1Q - 2Q					
Contract (N00024-05-C-6327):								
LRIP		4Q	1Q-4Q	1Q-4Q	1Q			
LRIP Options			4Q	1Q-4Q	1Q-4Q			
Production Option				3Q	1Q-4Q	1Q-4Q	1Q-4Q	
Contract (N00024-08-C-TBD):								
Competitive Production Contract					2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Deliveries:								
N75 Deliveries			4Q	1Q-3Q				
N76 Deliveries				2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Test & Evaluation:								
OA		3Q						
SQT-II		4Q						
DT/OT				1Q				
Operations and Maintenance Support			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

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EXHIBIT R-2a, RDT&E Project Justification								DATE:			
								February 2006			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME				PROJECT NUMBER AND NAME					
RDT&E, N / BA-4		0603502N, Surface and Shallow Water MCM				1233 Mine Counter Measures Mid-Life Upgrades					
COST (\$ in Millions)	Prior Years Cost		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Total Program
Project Cost	73.506		3.359	15.617	20.160	31.179	19.204	3.832	3.884	Continuing	Continuing
RDT&E Articles Qty											
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:											
<p>(1) High-Frequency, Wide Band (HFWB) is a technology upgrade to the SQQ-32 Towed Body which will incorporate HFWB technology into the detection sonar to address performance deficiencies against new mine threats in the littorals. This upgrade will be installed on MCM-1 Class ships with the SQQ-32(V)3 and will develop new transducer modules, fiber optic cable and modify topside processing and display software. 2) Mine Warfare and Environmental Decision Aids Library (MEDAL) is a software segment on the Global Command and Control System – Maritime (GCCS-M). MEDAL provides mine and mine warfare planning and evaluation tools and databases to the MCM Commander. (3) MCM Command Control, Communication, Computers and Intelligence (C4I) meet FORCEnet implementation standards; develop and maintain Mine Warfare (MIW) C4I Surveillance and Reconnaissance (C4ISR) architecture; identify and validate C4ISR shortfalls. 4) Develop and implement Course of Action Planner (COAP). 5) Battle Space Profiler (BSP) is used to optimize sonar setup (towed body depth and depression/elevation (D/E) angles), support mission planning based on predicted sonar performance, and adapt mission planning to changes in the environment and threats. Improvement to the BSP system will allow the BSP to become an in situation real time environmental data collection system and will allow sharing pertinent data such as MEDAL contact and environmental databases, as well as all Navigation information. 6) Unmanned Submersible Vehicle (USV) Sweep System is a magnetic/acoustic sweep system developed to sweep acoustic/magnetic influence mines from a small unmanned surface platform deployed from the Littoral Combat Ship (LCS).</p>											

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades																	
<b>(U) B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>BSP / Product Development</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.000</td> <td>1.129</td> <td>0.341</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					<b>BSP / Product Development</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.000	1.129	0.341	RDT&E Articles Quantity				
<b>BSP / Product Development</b>		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		0.000	1.129	0.341															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>BSP / Support</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.000</td> <td>0.110</td> <td>0.050</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					<b>BSP / Support</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.000	0.110	0.050	RDT&E Articles Quantity				
<b>BSP / Support</b>		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		0.000	0.110	0.050															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; height: 40px; margin-top: 10px;"></div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>BSP / Management</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.000</td> <td>0.320</td> <td>0.106</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					<b>BSP / Management</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.000	0.320	0.106	RDT&E Articles Quantity				
<b>BSP / Management</b>		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		0.000	0.320	0.106															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>BSP TOTAL</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">0.000</td> <td style="width: 15%;">1.559</td> <td style="width: 15%;">0.497</td> </tr> </table>					<b>BSP TOTAL</b>		0.000	1.559	0.497										
<b>BSP TOTAL</b>		0.000	1.559	0.497															

R-1 SHOPPING LIST - Item No.

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UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 13 of 98)

# UNCLASSIFIED

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>																																																			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades																																																				
<p><b>(U) B. Accomplishments/Planned Program</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 35%;"><b>C4I / Product Development</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.465</td> <td>0.703</td> <td>0.708</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>Product Development:</b> Continue MIW information system engineering effort. This effort to include the ongoing development of the MIW C4ISR Architecture, which documents the Information Exchange Requirements of the MIW community and serves as Architecture for all MIW Programs of Record as required by DODI 5000.2. Rev 2 Architecture. Rev 3 Architecture. Rev 4 Architecture.</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 35%;"><b>C4I / Support</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.350</td> <td>0.300</td> <td>0.400</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>Support:</b> Identification of C4ISR shortfalls within the MIW community and analysis of potential solutions are accomplished through membership on the FORCEnet Requirements and Architecture Working Groups. System Engineering Support is also provided to the SMCM Class identifying class issues and seeking engineering solutions. The MIW Architecture is utilized to conduct assessments in order to identify shortfalls and provide C4ISR solutions to the MIW community. Specific ongoing initiatives include the continued MIW C4ISR assessment, MCM/MHC LAN improvement program, continued MEDAL/Tactical Environmental Data Services (TEDS) integration, and the integration of MIW tactical databases into the Global Enterprise Systems.</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 35%;"><b>C4I / Management</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.182</td> <td>0.153</td> <td>0.223</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>Management:</b> Provide program management support and travel for MIW C4I program.</p> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;"><b>C4I TOTAL</b></td> <td style="width: 15%;"></td> <td style="width: 15%;">0.997</td> <td style="width: 15%;">1.156</td> <td style="width: 15%;">1.331</td> </tr> </table>					<b>C4I / Product Development</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.465	0.703	0.708	RDT&E Articles Quantity					<b>C4I / Support</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.350	0.300	0.400	RDT&E Articles Quantity					<b>C4I / Management</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.182	0.153	0.223	RDT&E Articles Quantity					<b>C4I TOTAL</b>		0.997	1.156	1.331
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EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades		

**(U) B. Accomplishments/Planned Program**

<b>COAP / Product Development</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.868	0.852
RDT&E Articles Quantity				

**Product Development:**  
 Begin the development and design of Build 0. Continue testing and delivery of Build 0. Begin development and design of Build 1. Continue the development and design of Build 1. Continue testing and delivery of Build 1. Begin development and design of Build 2.

<b>COAP / Support</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.110	0.110
RDT&E Articles Quantity				

**Support:**  
 Oversee technical integration of developed algorithms and models that have demonstrated their effectiveness in reducing the complexity of the MCM planning problem into a manageable set of options depending on the operational objective. Support effort to include communication with activities such as ONR and NSWC-PC to coordinate the incorporation of validated algorithms and models into MEDAL with the Commander's Estimate of the Situation framework in order to effectively simplify the MCM planning problem for CSG and ESG staffs and therefore provide the speed, agility, adaptability, and flexibility required for modern MCM operations.

<b>COAP / Management</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.094	0.080
RDT&E Articles Quantity				

**Management:**  
 Provide program management support and travel for Course Of Action Planner program. Program management shall include overall technical guidance and leadership for the program. Other ongoing PM support includes oversight of financial and logistics efforts and adequate coordination with MEDAL. Other PM tasking to include briefings, demonstrations, and project planning as required.

<b>COAP TOTAL</b>		<b>0.000</b>	<b>1.072</b>	<b>1.042</b>
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UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 15 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades		
<b>(U) B. Accomplishments/Planned Program</b>				
<b>GCCS-M4X / Product Development</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.468	0.000
RDT&E Articles Quantity				
<b>Product Development:</b> Developed and integrated GCCS-M 4.x hardware for M-class ships and expeditionary units. This effort includes the identification, approval, design, planning, programming, budgeting and accomplishment of improvements that increase the ability of the MIW ships to perform assigned missions. This is the first step in a larger plan to upgrade the MCM and MHC Class ships to the full IT-21 suite by rapidly inserting the minimum components enabling the MCM fleet to maximize operational effectiveness and minimize associated risk for own force and supported joint forces.				
<b>GCCS TOTAL</b>		<b>0.000</b>	<b>0.468</b>	<b>0.000</b>

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Exhibit R-2, RDTEN Budget Item Justification  
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EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades		
<b>(U) B. Accomplishments/Planned Program</b>				
<b>HFWB / Product Development</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	5.335	5.432
RDT&E Articles Quantity				
Begin Design and fabrication of transducer and associated electronics; Integration of fiber optic tow cable; Design and selection of shipboard COTS processing and operator console components. Continue design and fabrication efforts; Begin laboratory integration, testing and in-water component tests.				
<b>HFWB / Support</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	2.467	2.400
RDT&E Articles Quantity				
Develop beamforming and display software; Modify existing software and integration of new software; Integrated Logistic Support (ILS): Develop Initial Capabilities Documents (ICDs), installation packages, technical manual and training updates. Continue software development and integration; Integrated Logistic Support (ILS): Continue ILS efforts.				
<b>HFWB / T&amp;E</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.175	0.725
RDT&E Articles Quantity				
Conduct component and development Environmental Qualification Testing (EQT).				
<b>HFWB / Management</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.812	0.974
RDT&E Articles Quantity				
<b>Management:</b> Provide program management support and travel for High Frequency Wideband program.				
<b>HFWB TOTAL</b>		<b>0.000</b>	<b>8.789</b>	<b>9.531</b>

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Exhibit R-2, RDTEN Budget Item Justification  
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# UNCLASSIFIED

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EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades																	
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<b>MEDAL / Support</b>		FY 05	FY 06	FY 07															
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<b>MEDAL / Management</b>		FY 05	FY 06	FY 07															
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RDT&E Articles Quantity																			
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<b>MEDAL TOTAL</b>		2.362	2.573	5.957															

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Exhibit R-2, RDTEN Budget Item Justification  
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# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades																	
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<b>USV / Product Development</b>		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		0.000	0.000	1.500															
RDT&E Articles Quantity																			
Hardware and Software Development of magnetic/acoustic sweep system for small unmanned surface platform .																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>USV / Support</b></td> <td style="width: 10%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					<b>USV / Support</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000	RDT&E Articles Quantity				
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Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000															
RDT&E Articles Quantity																			
Logistics and integration Support for Boat Platform and Host Platform/LCS.																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>USV / T&amp;E</b></td> <td style="width: 10%;"></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					<b>USV / T&amp;E</b>		FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000	RDT&E Articles Quantity				
<b>USV / T&amp;E</b>		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000															
RDT&E Articles Quantity																			
Risk Reduction Testing/ CT/DT/OT Planning.																			
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<b>USV / Management</b>		FY 05	FY 06	FY 07															
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RDT&E Articles Quantity																			
Program Management/Travel/TDA Costs.																			
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<b>USV TOTAL</b>		0.000	0.000	1.802															

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EXHIBIT R-2, RDT&E Budget Item Justification		DATE: <b>February 2006</b>																																				
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-4</b>		R-1 ITEM NOMENCLATURE 1233 Mine Counter Measures Mid-Life Upgrades																																				
<p><b>(U) C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">(U) C. PROGRAM CHANGE SUMMARY:</th> <th style="text-align: right; width: 15%;">FY 2005</th> <th style="text-align: right; width: 15%;">FY 2006</th> <th style="text-align: right; width: 15%;">FY 2007</th> </tr> </thead> <tbody> <tr> <td>FY06 President's Budget</td> <td style="text-align: right;">3.813</td> <td style="text-align: right;">15.855</td> <td style="text-align: right;">19.513</td> </tr> <tr> <td>FY07 President's Budget</td> <td style="text-align: right;">3.359</td> <td style="text-align: right;">15.617</td> <td style="text-align: right;">20.160</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.454</td> <td style="text-align: right; border-top: 1px solid black;">-0.238</td> <td style="text-align: right; border-top: 1px solid black;">0.647</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments:</td> </tr> <tr> <td>Inflation</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.103</td> </tr> <tr> <td>Pay Rates</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.029</td> </tr> <tr> <td>Programmatic Changes</td> <td style="text-align: right;">-0.454</td> <td style="text-align: right;">-0.238</td> <td style="text-align: right;">0.515</td> </tr> <tr> <td>Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">-0.454</td> <td style="text-align: right; border-top: 1px solid black;">-0.238</td> <td style="text-align: right; border-top: 1px solid black;">0.647</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) Schedule: Funding provides increase infrastructure within MEDAL which supports increased functionality. Current MEDAL schedule will be followed.</p> <p>(U) Technical: MEDAL Data Fusion will provide additional capability within MEDAL to automate process of fusing contacts with consistent results and less time. Course of Action Planner (COAP) will provide a set of tools which utilizes the Commander's Estimate of the Situation (CES) framework. COAP works within MEDAL to support MIW decision making.</p>			(U) C. PROGRAM CHANGE SUMMARY:	FY 2005	FY 2006	FY 2007	FY06 President's Budget	3.813	15.855	19.513	FY07 President's Budget	3.359	15.617	20.160	Total Adjustments	-0.454	-0.238	0.647	Summary of Adjustments:				Inflation	0.000	0.000	0.103	Pay Rates	0.000	0.000	0.029	Programmatic Changes	-0.454	-0.238	0.515	Subtotal	-0.454	-0.238	0.647
(U) C. PROGRAM CHANGE SUMMARY:	FY 2005	FY 2006	FY 2007																																			
FY06 President's Budget	3.813	15.855	19.513																																			
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Summary of Adjustments:																																						
Inflation	0.000	0.000	0.103																																			
Pay Rates	0.000	0.000	0.029																																			
Programmatic Changes	-0.454	-0.238	0.515																																			
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R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM		PROJECT NUMBER AND NAME 1233 Mine Counter Measures Mid-Life Upgrades					

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
2622 / OPN (LV075/LV078/LV080)	14.561	23.876	21.876						
SUPPORT	1.167	1.395	1.631						
TOTAL	15.728	25.271	23.507						

**(U) E. ACQUISITION STRATEGY:**

HFVB - NSWC, Panama City will team with a university laboratory to design and develop the HFVB upgrade to the AN/SQQ-32. Contract award for Integration Contractor.

BSP - The system is being developed by NAVO, NRL and Naval Surface Warfare Center Panama City. The improvements being incorporated into the BSP system are modifications to existing Naval Oceanographic Office and NRL products

Mine Warfare and Environmental Decision Aids Library (MEDAL) - requirements for MEDAL Builds are generated through a formal requirements process. Requirements conferences gather a list of candidate functions based on a logical sequence to fully implement the overall software architecture. The fleet is presented with a recommended list of candidate capabilities based on this program plan, doctrine, fleet comments, and technology. These capability items are then prioritized by the fleet representatives (coordinated by Commander Mine Warfare Command). The fleet inputs are then consolidated by COMINEWARCOM into an overall list which is then presented to Navy leadership for pricing and final selection. The selection is based on price, risk, available funding, and possibly by other program factors (e.g., ensure that MEDAL supports other program delivery schedules). Selection balances immediate needs, long term objectives, technical maturity and other programmatic factors. A verification and validation process is applied to any algorithms, tactics, or models to be incorporated in the software. MEDAL development to include integration of data fusion techniques and incorporation of Data Access Layer (DAL) architecture to meet FORCEnet requirements. Acquisition strategy for Course of Action Planner (COAP) is to deliver the software module within MEDAL builds by implementing the Commander's Estimate of the Situation framework into the MEDAL software.

USV- The Unmanned Surface Vehicle sweep system effort will be transferred from ONR to PMS495 in FY07. PMS495 will award an SD+D contract to continue development of the system. It will be capable of sweeping mines in the littoral waters. The SD+D phase will be followed by milestone C LRIP decision and then LRIP and full rate production.

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTE Budget Item Justification  
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# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2006						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			1233 Mine Counter Measures Mid-Life Upgrades								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(BSP) Develop Bottom Sediment Cla	WX	NRL	0.000					0.380	10/05	0.024	10/06	Continuing	Continuing	
(BSP) Develop Current Profiler	CPIF	NAVO	0.000					0.217	10/05	0.091	10/06	Continuing	Continuing	N/A
(BSP) Develop Hydro-Optics Packag	WX	NAVO	0.000					0.200	10/05			0.000	0.200	
Systems Engineering	Various	NSWC, PC/NAVAIR						0.100	11/05	0.066	11/06	Continuing	Continuing	
(BSP) System Integration	WX	NSWC, Panama City, FL	0.000					0.232		0.160	11/06	Continuing	Continuing	
Subtotal Product Development			0.000			0.000		1.129		0.341		0.000	1.470	
Remarks:														
(BSP) Develop Logistics Products	WX	NSWC, Panama City, FL	0.000					0.110	10/05	0.050	11/06	Continuing	Continuing	N/A
Subtotal Support			0.000			0.000		0.110		0.050		0.000	0.160	
Remarks:														
Subtotal T&E			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Program Mangement Support	CPFF	CACI						0.050	10/05	0.030	10/06	Continuing	Continuing	N/A
Travel	Various	NAVSEA	0.000					0.080		0.020		Continuing	Continuing	
Government Engineering Support	WX	NSWC, Panama City, FL						0.190		0.056		Continuing	Continuing	N/A
Subtotal Management			0.000			0.000		0.320		0.106		0.000	0.426	
Remarks:														
BSP TOTAL			0.000			0.000		1.559		0.497		0.000	2.056	

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 22 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE:							
APPROPRIATION/BUDGET ACTIVITY								February 2006							
RDT&E, N / BA-4				PROGRAM ELEMENT				PROJECT NUMBER AND NAME							
				0603502N, Surface and Shallow Water MCM				1233 Mine Counter Measures Mid-Life Upgrades							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost				FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	Various	NSWC, PC/NAVAIR	0.348				0.465	11/04	0.703	11/05	0.708	11/06	Continuing	Continuing	
															N/A
Subtotal Product Development			0.348				0.465		0.703		0.708		0.000	2.224	
Remarks:															
Software Development	WX	NSWC, Panama City, FL	0.302										0.000	0.302	N/A
Software Development	SS/FFP	SAIC					0.350	11/04	0.300	11/05	0.400	11/06	Continuing	Continuing	
Subtotal Support			0.302				0.350		0.300		0.400		0.000	1.352	
Remarks:															
Subtotal T&E			0.000				0.000		0.000		0.000		0.000	0.000	
Remarks:															
Program Management Support	CPFF	CACI	0.110				0.058	11/04	0.050	10/05	0.045	10/06	Continuing	Continuing	N/A
Travel			0.039				0.035	11/04					Continuing	Continuing	
Government Engineering Support	WX	NSWC, Panama City, FL							0.103	10/05	0.178	10/06	0.000	0.281	
Program Management Support	Various	NAVSEA	0.068				0.089	11/04					Continuing	Continuing	N/A
SBIR Assessment			0.019										0.000	0.000	N/A
Subtotal Management			0.236				0.182		0.153		0.223		0.000	0.794	
Remarks:															
C4I TOTAL			0.886				0.997		1.156		1.331		0.000	4.370	

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UNCLASSIFIED

Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 23 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)								DATE:							
APPROPRIATION/BUDGET ACTIVITY								February 2006							
RDT&E, N / BA-4				PROGRAM ELEMENT				PROJECT NUMBER AND NAME							
				0603502N, Surface and Shallow Water MCM				1233 Mine Counter Measures Mid-Life Upgrades							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost				FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	Various	NSWC, PC/NAVAIR	0.000						0.868	11/05	0.852	11/06	Continuing	Continuing	
															N/A
Subtotal Product Development			0.000				0.000		0.868		0.852		0.000	1.720	
Remarks:															
Software Development	SS/FFP	SAIC							0.110	11/05	0.110	11/06	Continuing	Continuing	N/A
Subtotal Support			0.000				0.000		0.110		0.110		0.000	0.220	
Remarks:															
Subtotal T&E			0.000				0.000		0.000		0.000		0.000	0.000	
Remarks:															
Program Management Support	CPFF	CACI							0.045	10/05	0.050	10/06	Continuing	Continuing	N/A
Travel									0.005	10/05	0.005	10/06	Continuing	Continuing	
Government Engineering Support	WX	NSWC, Panama City, FL							0.044	10/05	0.025	10/06	Continuing	Continuing	N/A
Subtotal Management			0.000				0.000		0.094		0.080		0.000	0.174	
Remarks:															
COAP TOTAL			0.000				0.000		1.072		1.042		0.000	2.114	

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**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 24 of 98)



UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2006				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			1233 Mine Counter Measures Mid-Life Upgrades								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	Various	NSWC, PC/NAVAIR						0.468	11/05			0.000	0.468	
														N/A
Subtotal Product Development			0.000			0.000		0.468		0.000		0.000	0.468	
Remarks:														
														N/A
Subtotal Support			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Subtotal T&E			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
														N/A
														N/A
														N/A
Subtotal Management			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
GCCS TOTAL			0.000			0.000		0.468		0.000		0.000	0.468	

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 25 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)							DATE: February 2006							
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			1233 Mine Counter Measures Mid-Life Upgrades								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WX	ARL:UT						3.410	11/05	3.750	11/06	Continuing	Continuing	
Ancillary Hardware Development	TBD	Contractor (TBD)						0.650	03/06	1.107	11/06	Continuing	Continuing	N/A
Tow Cable Development	WX	NSWC, Panama City, FL						0.850	10/05	0.330	10/06	Continuing	Continuing	
Ship Integration	WX	NSWC, Panama City, FL						0.425	10/05	0.245	10/06	Continuing	Continuing	
Subtotal Product Development			0.000			0.000		5.335		5.432		0.000	10.767	
Remarks:														
(HFWB) Software Development	WX	ARL:UT; NSWC:PC						1.617	11/05	1.400	11/06	Continuing	Continuing	N/A
(HFWB) Integrated Logistics Support	WX	NSWC, Panama City, FL						0.850	10/05	1.000	10/06	Continuing	Continuing	
Subtotal Support			0.000			0.000		2.467		2.400		0.000	4.867	
Remarks:														
Developmental Test & Evaluation	WX	NSWC:PC, ARL:UT						0.175	11/05	0.725	11/06	Continuing	Continuing	
Subtotal T&E			0.000			0.000		0.175		0.725		0.000	0.900	
Remarks:														
Program Management Support	Various	NAVSEA						0.662	10/05	0.774	10/06	Continuing	Continuing	N/A
Travel	PD	Various												
Government Engineering Support	WX	NSWC, Panama City, FL						0.150	10/05	0.200	10/06	Continuing	0.350	N/A
Subtotal Management			0.000			0.000		0.812		0.974		0.000	1.786	
Remarks:														
HFWB TOTAL			0.000			0.000		8.789		9.531		0.000	18.320	

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2, page 26 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2006						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			1233 Mine Counter Measures Mid-Life Upgrades								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
														N/A
Subtotal Product Development			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Software Development	SS/FFP	SAIC	2.084			1.987	11/04	2.112	11/05	5.043	11/06	Continuing	Continuing	N/A
Software Development	WX	NSWC, Panama, City, FL	0.221									Continuing	Continuing	
Subtotal Support			2.305			1.987		2.112		5.043		0.000	11.447	
Remarks:														
Subtotal T&E			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Program Management Support	CPFF	CACI	0.196			0.094	11/04	0.150	10/05	0.245	10/06	Continuing	Continuing	N/A
Travel			0.061			0.063	11/04	0.015	10/05			Continuing	Continuing	
SBIR Assessment			0.054									0.000	0.054	
Government Engineering Support	WX	NSWC, Panama, City, FL						0.296	10/05	0.669	10/06	Continuing	Continuing	
Program Management Support	Various	NAVSEA	0.132			0.218	11/04					0.218	0.350	N/A
Subtotal Management			0.443			0.375		0.461		0.914		0.218	2.411	
Remarks:														
MEDAL TOTAL			2.748			2.362		2.573		5.957		0.218	13.858	

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 27 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: <b>February 2006</b>				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
<b>RDTE&amp;E, N / BA-4</b>			0603502N, Surface and Shallow Water MCM			1233 Mine Counter Measures Mid-Life Upgrades								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	TBD	TBD								0.900	03/07	Continuing	Continuing	
Primary Hardware Development	WX/RCP	NSWC, Panama City, FL								0.600		Continuing	Continuing	N/A
Subtotal Product Development			0.000			0.000		0.000		1.500		0.000	1.500	
Remarks: All work contracted to Raytheon on the CPIF contract was transferred to Lockheed Martin FP contract and NSWC, CSS Panama City, Florida.														
Logistics Support and Integration	Various	TBD								0.000		Continuing	Continuing	N/A
Subtotal Support			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Subtotal Support			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Contractor Engineering Support	CPIF	TBD								0.135	11/06	Continuing	Continuing	N/A
Government Engineering Support	WX	NSWC, Panama City, FL								0.137		Continuing	Continuing	N/A
Travel		NAVSEA								0.030		Continuing	Continuing	N/A
Subtotal Support			0.000			0.000		0.000		0.302		0.000	0.302	
Remarks:														
<b>USV TOTAL</b>			<b>0.000</b>			<b>0.000</b>		<b>0.000</b>		<b>1.802</b>		<b>0.000</b>	<b>1.802</b>	

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2, page 28 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

EXHIBIT R-4, Schedule Profile										DATE: <b>February 2006</b>																			
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NAME AND NUMBER					PROJECT NAME AND NUMBER																			
<b>RDTE&amp;E, N/BA-4</b>					0603502N, Surface & Shallow Water MCM					1233 Mine Counter Measures Mid-Life Upgrades																			
<b>BSP PROGRAM SCHEDULE</b>																													
		FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
HW/SW Design and Development																													
Preliminary Design Review																													
Critical Design Review																													
Env., Shock, & Safety Testing																													
EDM Installation & C/O																													

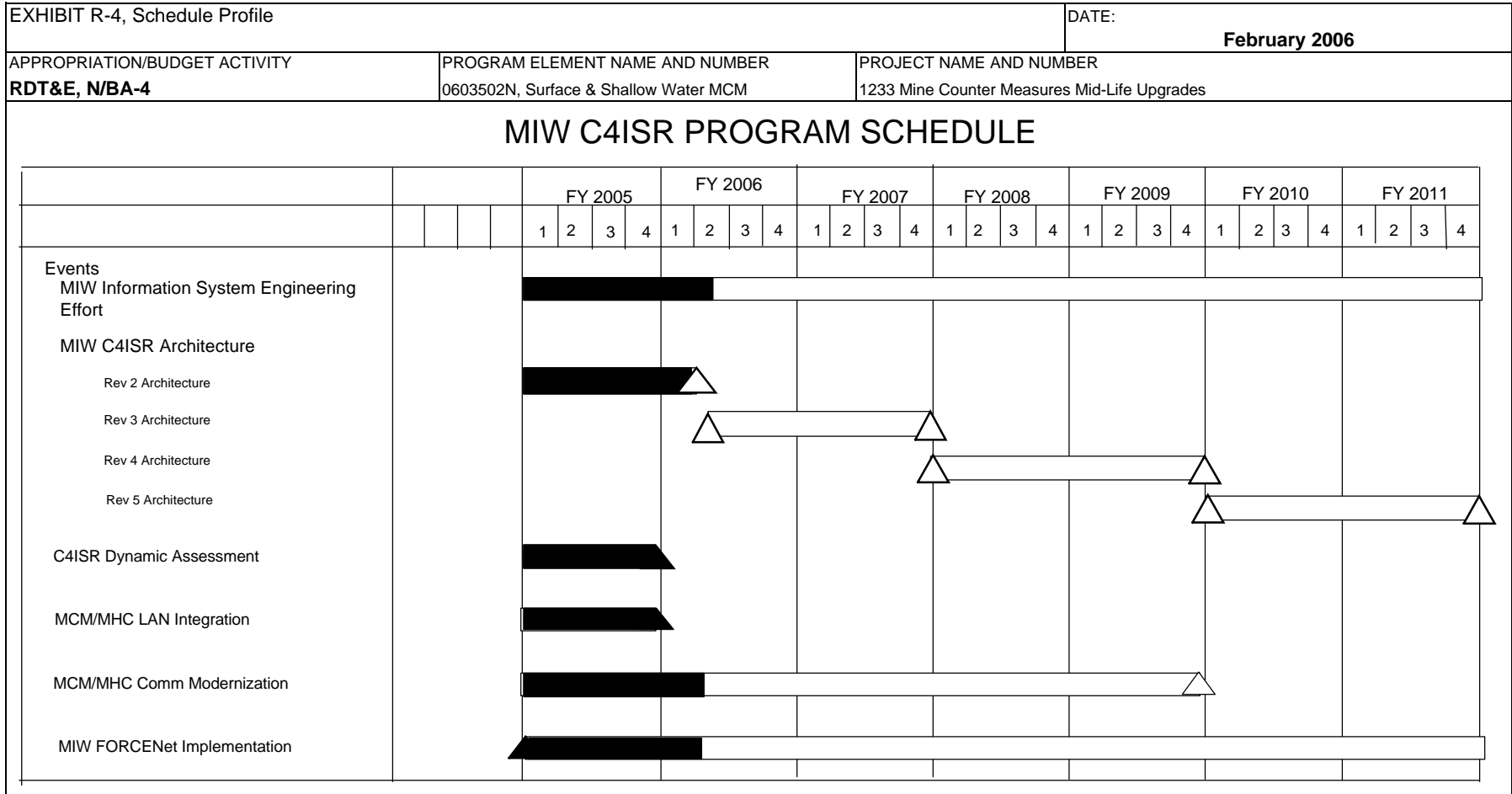
R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 29 of 98)

UNCLASSIFIED

CLASSIFICATION:

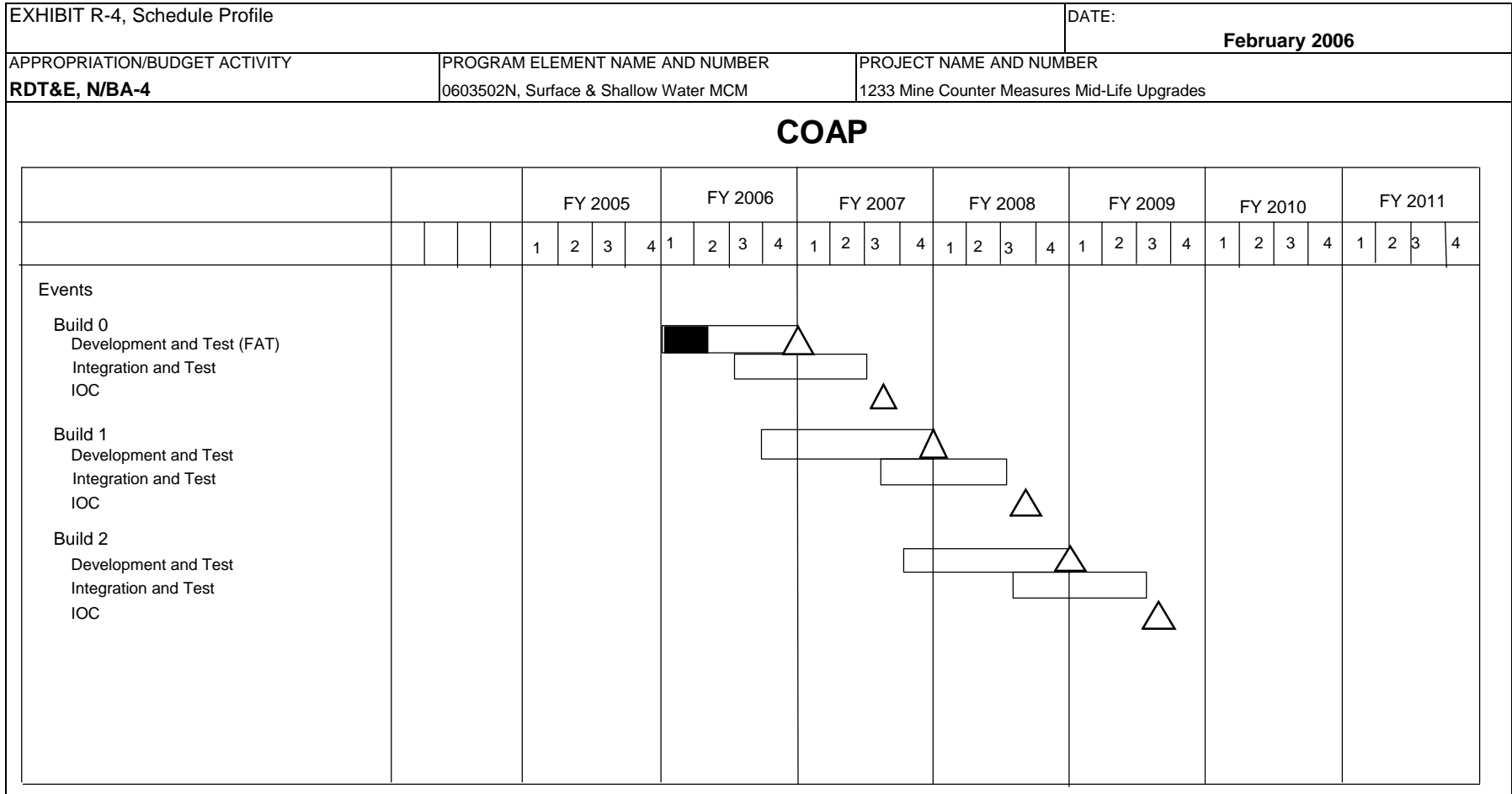


R-1 SHOPPING LIST - Item No. 36

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CLASSIFICATION:



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UNCLASSIFIED

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CLASSIFICATION:

EXHIBIT R-4, Schedule Profile		DATE: <b>February 2006</b>																											
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N/BA-4</b>	PROGRAM ELEMENT NAME AND NUMBER 0603502N, Surface & Shallow Water MCM	PROJECT NAME AND NUMBER 1233 Mine Counter Measures Mid-Life Upgrades																											
<b>GCCS-M 4.x for MCM PROGRAM SCHEDULE</b>																													
		FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
Events					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Development and Integration of GCCS-M 4.x hardware:																													
M-class ships																													
Expeditionary units																													

R-1 SHOPPING LIST - Item No. 36

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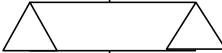



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**CLASSIFICATION:**

EXHIBIT R-4, Schedule Profile			DATE: <b>February 2006</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RD&amp; E, N/BA-5</b>		PROGRAM ELEMENT 0603502N, Surface and Shallow Water MCM		R-1 ITEM NOMENCLATURE 1233 Mine Counter Measures Mid-Life Upgrades	

E. Schedule Profile

## HFWB SONAR IMPROVEMENT PROGRAM SCHEDULE

					FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Events																																
Design & Fabrication																																
Integration Contractor Award																																
Tow Cable Integration																																
In-water Component Tests																																
Component EQT Tests																																
Ship Integration and At-sea Test																																

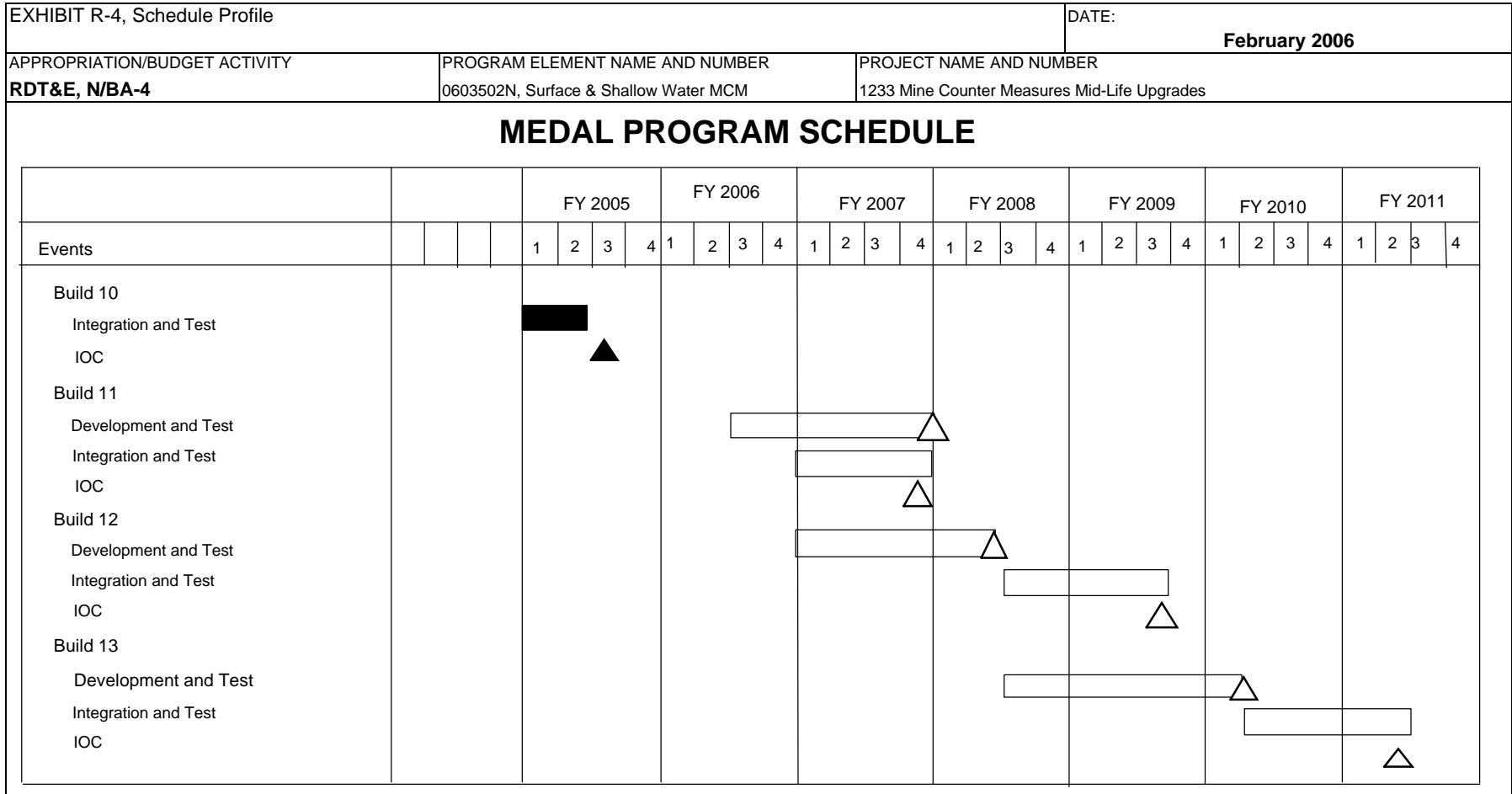
R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**Exhibit R-2, RD&E Budget Item Justification**  
(Exhibit R-2, page 33 of 98)

UNCLASSIFIED

CLASSIFICATION:



R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile																		DATE: <b>February 2006</b>															
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N/BA-4</b>						PROGRAM ELEMENT NAME AND NUMBER 0603502N, Surface & Shallow Water MCM								PROJECT NAME AND NUMBER 1233 Mine Counter Measures Mid-Life Upgrades																			
<b>MEDAL PROGRAM SCHEDULE CONT'D</b>																																	
						FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
						1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Events  Build 14 Development and Test Integration and Test																										<div></div> <div></div> <div></div> <div></div>							

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile														DATE:																		
														February 2006																		
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NAME AND NUMBER								PROJECT NAME AND NUMBER																			
RDT&E, N/BA-4					0603502N, Surface & Shallow Water MCM								1233 Mine Counter Measures Mid-Life Upgrades																			
USV PROGRAM SCHEDULE																																
					FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
USV Contract Award													△																			
SDD Phase													<div></div>																			
CT/DT																	△				△											
OT																									△							
LRIP Decision/Milestone C																									△							
LRIP Production																									△							
Full Rate Production Decision																													△			

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 36 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.

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**UNCLASSIFIED**

### Exhibit R-2, RD TEN Budget Item Justification

(Exhibit R-2, page 37 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.

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**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 38 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.

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**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 39 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.

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**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 40 of 98)



**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.

36

**UNCLASSIFIED**

### Exhibit R-2, RD TEN Budget Item Justification

(Exhibit R-2, page 41 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 42 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.

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**UNCLASSIFIED**

### Exhibit R-2, RD TEN Budget Item Justification

(Exhibit R-2, page 43 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-4	Surface & Shallow Water MCM, 0603502N					Unmanned Undersea Vehicle 2094					
COST (\$ in Millions)	Prior Years Cost	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011		Cost to Complete	Total Program
Project Cost	300.966	58.745	53.805	42.224	56.773	60.020	108.618	160.047		Continuing	Continuing
RDT&E Articles Qty			2				1	4			7

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The November 2004 UUV Master Plan establishes Intelligence, Surveillance, and Reconnaissance (ISR) as the Navy's top UUV priority. The second priority is to provide a clandestine, mine reconnaissance capability and Anti-Submarine Warfare is priority three.

The Unmanned Undersea Vehicle (UUV) project funds development of UUV systems consistent with the 2004 UUV Master Plan. The AN/BLQ-11 Long-Term Mine Reconnaissance System (LMRS) was being developed to provide a robust, long-term Fleet capability to conduct clandestine minefield reconnaissance. The LMRS Engineering Development Model (EDM) will be completed to mature and test critical technology for follow-on UUVs. The Advanced Development UUV (ADUUV) development will continue to mature and test critical modular UUV design technology for follow-on UUV programs. The UUV program will continue to mature key UUV technologies and sonar sensors for follow-on UUV programs. Planning has begun for a new acquisition program to develop a modular, reconfigurable 21" MRUUV System (MRUUVS) for contract award in FY07. The first payload developed by this program will support the MCM mission. Other modular payload developments will be initiated beginning in FY09. An AOA for the Large Displacement (LD) MRUUV was completed in FY04. The Office of Naval Research will develop technologies for payload sensors and increased autonomy to support risk mitigation for the UUV program. Technologies from these systems will transition to UUV during the FNC demonstration year. Technology Transition agreements between the Program office and ONR have been signed.

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME <b>Surface &amp; Shallow Water MCM, 0603502N</b>	PROJECT NUMBER AND NAME Unmanned Undersea Vehicle 2094/2852																	
<b>(U) B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>LMRS</b></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY07</td> <td style="width: 25%;"></td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>22.854</td> <td>3.555</td> <td>0.000</td> <td></td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td>1</td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;"> <p>Complete launch and recovery testing from an SSN. Conduct contract closeout.</p> </div>					<b>LMRS</b>	FY 05	FY 06	FY07		Accomplishments/Effort/Subtotal Cost	22.854	3.555	0.000		RDT&E Articles Quantity		1		
<b>LMRS</b>	FY 05	FY 06	FY07																
Accomplishments/Effort/Subtotal Cost	22.854	3.555	0.000																
RDT&E Articles Quantity		1																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>ADUUV</b></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY07</td> <td style="width: 25%;"></td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>15.557</td> <td>12.959</td> <td>0.000</td> <td></td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td>1</td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;"> <p>Complete development of an Advanced Development Unmanned Undersea Vehicle (ADUUV) and integrate Littoral - Precision Underwater Mapping Array (LPUMA) with ADUUV for 21" MRUUVS risk reduction.</p> </div>					<b>ADUUV</b>	FY 05	FY 06	FY07		Accomplishments/Effort/Subtotal Cost	15.557	12.959	0.000		RDT&E Articles Quantity		1		
<b>ADUUV</b>	FY 05	FY 06	FY07																
Accomplishments/Effort/Subtotal Cost	15.557	12.959	0.000																
RDT&E Articles Quantity		1																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>21" MRUUVS</b></td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY07</td> <td style="width: 25%;"></td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>19.923</td> <td>36.459</td> <td>42.224</td> <td></td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;"> <p>Continue pre milestone B risk reduction and acquisition planning for 21" MRUUV program.</p> </div>					<b>21" MRUUVS</b>	FY 05	FY 06	FY07		Accomplishments/Effort/Subtotal Cost	19.923	36.459	42.224		RDT&E Articles Quantity				
<b>21" MRUUVS</b>	FY 05	FY 06	FY07																
Accomplishments/Effort/Subtotal Cost	19.923	36.459	42.224																
RDT&E Articles Quantity																			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME <b>Surface &amp; Shallow Water MCM, 0603502N</b>	PROJECT NUMBER AND NAME Unmanned Undersea Vehicle 2094/2852		
<b>(U) B. Accomplishments/Planned Program</b>				
<b>LD MRUUV</b>	FY 05	FY 06	FY07	
Accomplishments/Effort/Subtotal Cost	0.411	0.832	0.000	
RDT&E Articles Quantity				
Conduct LD MRUUV requirements study.				

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2006</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME <b>Surface &amp; Shallow Water MCM, 060325N</b>	PROJECT NUMBER AND NAME <b>Unmanned Undersea Vehicle Q2094</b>

**(U) C. PROGRAM CHANGE SUMMARY:**

(U) Funding:	FY 2005	FY 2006	FY 2007	
FY06 President's Controls:	59.965	54.633	52.176	
FY07 President's Controls:	58.745	53.805	42.224	
Total Adjustments	-1.220	-0.828	-9.952	

Summary of Adjustments

Pay Rates			0.061	
Inflation			0.232	
Programmatic Changes			-10.007	
Warfare Center Rates			-0.238	
Miscellaneous Adjustments	-1.220	-0.828		
Subtotal	-1.220	-0.828	-9.952	

(U) Schedule:  
Not Applicable

(U) Technical:  
Not Applicable

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**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification						DATE:	
						<b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME <b>Surface &amp; Shallow Water MCM, 0603502N</b>		PROJECT NUMBER AND NAME Unmanned Undersea Vehicle 2094			
(U) D. OTHER PROGRAM FUNDING SUMMARY:							
<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
(U) E. ACQUISITION STRATEGY:							
A modular, reconfigurable 21" MRUVS will be initiated with a competitively awarded contract planned for FY07.							

R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 48 of 98)



# UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME							
RDT&E, N / BA-4			Surface & Shallow Water MCM, 0603502N			Unmanned Undersea Vehicle 2094							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY07 Costs	FY 07 Award Date				
LMRS	CPAF/IF	Boeing	119.529	10.544	N/A	0.800	N/A						
Fees			7.612										
LMRS	Various	Various	40.778	2.844	N/A	2.755	N/A						
ADUUV	CPIF	Lockheed Martin	17.244	6.974	N/A	7.000	N/A						
ADUUV	Various	Various	14.873	3.049		2.717							
UUV P3I	Various	Various	37.383										
21* MRUUVS	Various	Various	4.200	19.923		27.232		28.377	TBD				
UUV Test center	Various	Various	7.502										
LD MRUUV	Various	Various		0.411		0.832							
Subtotal Product Development			249.121	43.745		41.336		28.377					
Remarks:													
Development Support													
Software Development													
Integrated Logistics Support													
Configuration Management													
Technical Data													
Studies & Analyses													
GFE													
Award Fees													
Subtotal Support			0.000	0.000		0.000		0.000					
Remarks:													

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-4</b>			PROGRAM ELEMENT Surface & Shallow Water MCM, 0603502N			PROJECT NUMBER AND NAME Unmanned Undersea Vehicle 2094							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY07 Costs	FY 07 Award Date				
Developmental Test & Evaluation	Various	Various	5.978	5.459	N/A		N/A		N/A				
Operational Test & Evaluation	WR	Various	0.000		N/A		N/A		N/A				
GFE/GFI	Various	Various	0.644		N/A		N/A		TBD				
TTLRF	WR	Various	7.081		N/A		N/A		N/A				
Award Fees													
Subtotal T&E			13.703	5.459		0.000		0.000					
Remarks:													
Contractor Engineering Support			6.024	2.214	N/A	2.174	N/A	1.955	N/A				
Government Engineering Support			24.119	4.076	N/A	4.990	N/A	4.450	N/A				
Program Management Support			7.999	3.251	N/A	5.305	N/A	7.442	N/A				
Subtotal Management			38.142	9.541		12.469		13.847					
Remarks:													
Total Cost			300.966	58.745		53.805		42.224					

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VIRGINIA CLASS FOT&E |

## CLASSIFICATION:

EXHIBIT R4, Schedule Profile																DATE:								February 2006								
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME															
RDT&E, N /					Surface & Shallow Water MCM, 0603502N												Unmanned Undersea Vehicle 2094/2852															
Fiscal Year	2005				2006				2007				2008				2009				2010				2011				2012			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Complete LMRS Baseline																																
ADUUV Development/ LPUMA Integration																																
21" MRUUVS																																

R-1 SHOPPING LIST - Item No. 36

\* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2, page 51 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.

36

**UNCLASSIFIED**

### Exhibit R-2, RD TEN Budget Item Justification

(Exhibit R-2, page 52 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM					PROJECT NUMBER AND NAME 2131 Assault Breaching Systems					
COST (\$ in Millions)	Prior Years Cost		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Total Program
Project Cost	190.493		15.721	28.777	37.083	36.116	35.367	30.562	29.513	Continuing	Continuing
RDT&E Articles Qty											0

### (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program provides US Navy projects planned to counter the threat to amphibious landing forces from known and projected foreign land/sea mines and obstacles in the beach zone and surf zone approaches to amphibious assault areas. It develops a system of systems (Countermine/Counter Obstacle, Intelligence/Surveillance/Reconnaissance/Targeting (ISR/T), Navigation/Virtual Marking/Integration, C4I/Data Fusion) to provide a full assault breaching capability. Funding in FY 2004 is a Congressional Plus-Up for Venom Penetrator (part of the Counter mine demonstration).

The Counter Mine (CM) system will transition from a 6.3 S&T Concept Demonstration effort to a 6.4 development program after a concept decision/AoA in FY06. Three 6.3 S&T concepts will demonstrate the countermine technology by the beginning of FY05. A concept/decision/AoA will occur in FY05 and one of the concepts or a combination of the technologies will be chosen to move into the 6.4 development phase as the CM System (far-term).

A near-term Counter Mine/Counter Obstacle (CM/CO) system is also being characterized at the 6.3 S&T level to be used in the Fleet as an interim CM/CO capability until the "Far-Term" CM system is developed. This near-term system Joint Directed Attack Munition (JDAM) JDAM Assault Breaching System (JABS) consists of in-service MK 84 general purpose bombs with a JDAM tail kit. This system is already being used in the fleet, however it is being characterized for a limited assault breaching mission. Some Follow-On-Test and Evaluation (FOT&E), risk mitigation, logistics, and operational readiness concerns need to be addressed for the ABS mission with ABS funding.

The ISR/T capability is being provided by the Coastal Battlefield Reconnaissance & Analysis (COBRA) system. COBRA consists of three block capabilities which will all be integrated into the Fire Scout Unmanned Aerial Vehicle (UAV) as Littoral Combat Ship (LCS) Mission Modules. Block I capability is to detect surface laid mine lines on the beach (daytime) using Multi-spectral imaging. Block II will incorporate active laser technology which will transition from 6.3 S&T to detect surface laid mine lines in the surf zone (day and night). Block III will transition technology from 6.3 S&T to detect buried mine lines and will include on-board near real-time processing of imagery data.

The navigation effort involves requirements development and program planning to choose the navigational upgrades for the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU) to enable the craft to safely navigate the neutralized assault lanes. OP,N will fund the CRAFTALTS to upgrade the navigation systems.

After the assault lane has been neutralized, virtual or physical marking systems need to be developed to mark where the lane has been cleared and guide the assault craft through the lane.

Command, Control, Computers, Communications and Intelligence (C4I) will tie all of the above systems together under an integrated ABS architecture and also tie in with the integrated Mine Warfare architecture.

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 2131 Assault Breaching Systems																	
<b>(U) B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 35%;">Product Development</th><th style="width: 15%;"></th><th style="width: 15%;">FY05</th><th style="width: 15%;">FY06</th><th style="width: 15%;">FY07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">10.063</td><td style="text-align: center;">19.110</td><td style="text-align: center;">30.812</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>					Product Development		FY05	FY06	FY07	Accomplishments/Effort/Subtotal Cost		10.063	19.110	30.812	RDT&E Articles Quantity				
Product Development		FY05	FY06	FY07															
Accomplishments/Effort/Subtotal Cost		10.063	19.110	30.812															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 100px;"><b>Product Development:</b> Venom Penetrator. Far term technology maturity (Counter mine), ISR/Targeting Development (COBRA), Government Furnished Equipment (GFE): Mine Threat Acquisition for R&amp;D Development and Testing, DDGPS Development (Marking). Counter Mine System Development Contract beginning in FY06.</div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 35%;">Support</th><th style="width: 15%;"></th><th style="width: 15%;">FY05</th><th style="width: 15%;">FY06</th><th style="width: 15%;">FY07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">1.237</td><td style="text-align: center;">1.125</td><td style="text-align: center;">0.357</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>					Support		FY05	FY06	FY07	Accomplishments/Effort/Subtotal Cost		1.237	1.125	0.357	RDT&E Articles Quantity				
Support		FY05	FY06	FY07															
Accomplishments/Effort/Subtotal Cost		1.237	1.125	0.357															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 100px;"><b>Support:</b> Venom Penetrator. Mine Burial Effects/Mine Case/TNT Studies in support of requirements development, Fuse Vulnerability Studies. Tactical Decision Aid Development, Modeling and Simulation in support of Far-Term Development. ABS Scalability study.</div>																			

R-1 SHOPPING LIST - Item No.

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UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 54 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>													
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 2131 Assault Breaching Systems														
<b>(U) B. Accomplishments/Planned Program</b>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 35%;">Test and Evaluation</th> <th style="width: 15%;">FY05</th> <th style="width: 15%;">FY06</th> <th style="width: 15%;">FY07</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">0.331</td> <td style="text-align: center;">2.865</td> <td style="text-align: center;">0.170</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> </tr> </table>					Test and Evaluation	FY05	FY06	FY07	Accomplishments/Effort/Subtotal Cost	0.331	2.865	0.170	RDT&E Articles Quantity			
Test and Evaluation	FY05	FY06	FY07													
Accomplishments/Effort/Subtotal Cost	0.331	2.865	0.170													
RDT&E Articles Quantity																
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <b>Test and Evaluation:</b>  Venom Penetrator. Near Term (JABS) Risk Mitigation Testing; Commander Operational Test &amp; Evaluation Forces Test Support. </div>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 35%;">Management</th> <th style="width: 15%;">FY05</th> <th style="width: 15%;">FY06</th> <th style="width: 15%;">FY07</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">4.090</td> <td style="text-align: center;">5.677</td> <td style="text-align: center;">5.744</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> </tr> </table>					Management	FY05	FY06	FY07	Accomplishments/Effort/Subtotal Cost	4.090	5.677	5.744	RDT&E Articles Quantity			
Management	FY05	FY06	FY07													
Accomplishments/Effort/Subtotal Cost	4.090	5.677	5.744													
RDT&E Articles Quantity																
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <b>Management:</b>  Venom Penetrator. Program management support, In-house contractor support (CACI, COMOPTEVFOR, and Northrop Grumman). Technical Direction Agent/Design Agent (TDA/DA) Engineering Support of Mission Area Analysis, Analysis of Alternatives, Milestone B preparation, contract and acquisition documentation, Requirements Generation - Initial Capabilities Document (ICD), Capability Development Documents (CDD), Capability Production Documents (CPD), Analysis of Material approvals and Functional needs analysis/functional solutions analysis, Mine magazine inventory management and shipping, contract management and tests/studies, C4I/Data fusion. </div>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"><b>Total</b></td> <td style="width: 20%; text-align: center;"><b>15.721</b></td> <td style="width: 20%; text-align: center;"><b>28.777</b></td> <td style="width: 20%; text-align: center;"><b>37.083</b></td> </tr> </table>					<b>Total</b>	<b>15.721</b>	<b>28.777</b>	<b>37.083</b>								
<b>Total</b>	<b>15.721</b>	<b>28.777</b>	<b>37.083</b>													

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE:	February 2006
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4		2131 Assault Breaching Systems	
<b>(U) C. PROGRAM CHANGE SUMMARY:</b>			
<b>(U) C. PROGRAM CHANGE SUMMARY:</b>			
FY06 President's Budget	FY 2005	FY 2006	FY 2007
FY07 President's Budget	26.808	29.215	37.530
Total Adjustments	15.721	28.777	37.083
	(11.087)	(0.438)	(0.447)
Summary of Adjustments			
Inflation	0.000	0.000	0.167
Pay Rates	0.000	0.000	0.053
Programmatic Changes	(11.087)	(0.438)	(0.667)
Subtotal	(11.087)	(0.438)	(0.447)
(U) Schedule:			
Not Applicable			
(U) Technical:			
Not Applicable			

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: <b>February 2006</b>																					
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM		PROJECT NUMBER AND NAME 2131 Assault Breaching Systems																							
<p><b>(U) D. OTHER PROGRAM FUNDING SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Line Item No. &amp; Name</th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2005</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2006</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2007</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2008</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2009</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2010</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2011</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>To Complete</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>2624 / OPN</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">2.247</td> <td style="text-align: center;">8.269</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><b>(U) E. ACQUISITION STRATEGY:</b></p> <p>The FY04 and FY05 Initial Capabilities Document (ICD) and Capability Development Documents (CDD) tasks specifically complete the requirements generation process for the overarching mission area of Amphibious Operations in a Mined Environment leading to a MS B decision during FY06. The Functional Area Analysis (FAA) will provide the foundation for the "system of systems ICD/CDD required for Amphibious Operations in a Mined Environment. The FY04 and FY05 tasks will also allow the Navy to demonstrate the viability of concepts for Far Term System of Systems capabilities and justify the need for future funding. The FY04 funding was crucial to maintaining the inventory of threat mines that will be required for future mine lethality and vulnerability tests. The FY04 and FY05 tasks will develop ISR/Targeting systems and Navigation systems to support the Assault Breaching Mission. Milestone B for Countermine system development will occur in FY06 followed by a development contract award for the Countermine system development in FY06. Development of Block I COBRA(ISR/T) will continue into FY06 to prepare for a delivery of a Block I system for LCS Flight 0. FY07 funding will begin development of the COBRA Block II system to detect mine lines in the Surf Zone. The OPN in FY06 will go toward funding Navigational upgrades to the LCAC and LCU craft for more accurate navigation through the surf zone. FY07 OPN will also continue the Navigation upgrades to the LCAC and LCU as well as procure Block I COBRA systems for LCS Mission Modules.</p>								Line Item No. & Name	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>	2624 / OPN	0.000	2.247	8.269						
Line Item No. & Name	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>																		
2624 / OPN	0.000	2.247	8.269																								

R-1 SHOPPING LIST - Item No. 36

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 57 of 98)

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 58 of 98)

R-1 SHOPPING LIST - Item No.36

**UNCLASSIFIED**

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE:						
								<b>February 2006</b>						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			2131 Assault Breaching Systems								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Development Support Equipment	WX	IH, NSWC:PC, SAIC	11.721			0.185	06/05	0.725	11/05	0.257	11/06	Continuing	Continuing	N/A
Software Development	WX	NSWC:PC	8.037										8.037	N/A
Integrated Logistics Support	WX	IH, NSWC:PC	2.712										2.712	N/A
Configuration Management	WX	IH, NSWC:PC	3.744										3.744	N/A
Technical Data	WX	IH, NSWC:PC	2.588										2.588	N/A
Studies & Analysis	WX	IH, NSWC:PC	2.587			1.052	11/04	0.400	11/05	0.100	11/06	Continuing	Continuing	
GFE	WX	IH, NSWC:PC	0.400										0.400	N/A
Subtotal Support			31.789			1.237		1.125		0.357		0.000	34.508	
Remarks:														

R-1 SHOPPING LIST - Item No.36

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 59 of 98)

**UNCLASSIFIED**

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2006</b>					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4			PROGRAM ELEMENT 0603502N, Surface and Shallow Water MCM				PROJECT NUMBER AND NAME 2131 Assault Breaching Systems								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Developmental Test & Evaluation	WX, PD	IH, NSWC:PC TBD	26.422			0.331	11/04	2.865	11/05	0.170	11/06	Continuing	Continuing	N/A	
Operational Test & Evaluation	WX	IH, NSWC:PC TBD	8.655										8.655	N/A	
Tooling	WX	IH, NSWC:PC TBD	0.700										0.700	N/A	
GFE	WX	IH, NSWC:PC TBD	0.400										0.400	N/A	
Award Fees															
Subtotal T&E			36.177			0.331		2.865		0.170		0.000	39.543		
Remarks:															
Contractor Engineering Support	CPFF	CACI, Northrup Grumman	3.089			0.700	11/04	0.878	11/05	0.904	11/06	Continuing	Continuing	N/A	
Government Engineering Support	WX	IH, NSWC:PC	19.053			1.797	11/04	1.835	11/05	1.950	11/06	Continuing	Continuing	N/A	
Program Management Support	WX	IH, NSWC:PC, NAVSEA	11.537			0.207	11/04	2.889	11/05	2.815	11/06	Continuing	Continuing	N/A	
Travel	PD	NAVSEA	0.877			0.025	11/04	0.075	11/05	0.075	11/06	Continuing	Continuing	N/A	
Assessment/BTR	Various	Various	0.073			1.361							1.434	N/A	
Subtotal Management			34.629			4.090		5.677		5.744		0.000	50.140		
Remarks:															
Total Cost			190.493			15.721		28.777		37.083		0.000	272.074		

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**UNCLASSIFIED**

**Exhibit R-2, RDTEN Budget Item Justification**  
(Exhibit R-2, page 60 of 98)

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile																DATE:				February 2006																
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NAME AND NUMBER									PROJECT NAME AND NUMBER																						
RDT&E, N/BA-4					0603502N, Surface & Shallow Water MCM									2131 Assault Breaching Systems																						
ABS PROGRAM SCHEDULE																																				
					FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011							
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Milestones					MS B (COBRA) Block I				MS B (CM)																											
ONR 6.3 Demo Efforts													CM and CO Exploration/Technology																							
CMCO Acquisition/Development 6.4																	CM and CO System Development																			
CMCO System Design and Test					Draft CDD/Approval				Prep for MS B/Contract Award				CM - CO Contract Award																							
													System Design/Platform Integration																							
CMCO Technical Reviews									Contract Kickoff				SRR				SFR				SSR				PDR				EOA				CDR			
ISR/Navigation/C4I Development									ISR/Nav/C4I System Development																											

R-1 SHOPPING LIST - Item No. 36

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 61 of 98)

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RD&BA-4	Program Element (PE) No. and Name				2131 Assault Breaching Systems			
Schedule Profile: ABS		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
CM and CO Exploration/Technology Demonstration 6.3(O		1Q-4Q	1Q-4Q					
COBRA Milestone B		2Q						
MAA/MNS/Risk Mitigation/Requirements Devel:								
Draft CDD/Approval		1Q-4Q	1Q					
MS B (CM-BZ CO)			2Q					
Prep for MS B/Contract Award			1Q-3Q					
CM and CO System Development			2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
CM- BZ CO Contract Award			4Q					
System Design/Platform integration			2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Technical Reviews:								
Contract Kickoff			4Q					
SRR - System requirements Review				1Q				
SFR- System Functional Review				3Q				
SSR - System Software Review				4Q				
PDR - Preliminary Design Review					1Q			
EOA - Early Operational Assessment						1Q		
CDR- Critical Design Review						2Q		
ISR/NAV/C4I Development		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

R-1 SHOPPING LIST - Item No. 36

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# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM				PROJECT NUMBER AND NAME 3102 Low Frequency Broadband					
COST (\$ in Millions)	Prior Years Cost	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011		Cost to Complete	Total Program
Project Cost	<b>0.000</b>	<b>0.000</b>	<b>9.702</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>			<b>9.702</b>
RDT&E Articles Qty											
<p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>Low Frequency Broadband (LFBB) is a development program for providing Low-frequency, broadband (LFBB) sensor and processor payload for an unmanned, underwater vehicle (UUV). The project provides a needed capability for detection of buried mines and identification of mines by a combination of imaging and non-imaging signal processing technologies. This technology is being transitioned from ONR projects, which have demonstrated the technology, but need to be transitioned into a system. Funding for this program has been transferred to the Surface Mine Countermeasures Unmanned Undersea Vehicle (SMCM UUV, Project 3123) starting in FY07.</p>											

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 63 of 98)

# UNCLASSIFIED

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 3102 Low Frequency Broadband

**(U) B. Accomplishments/Planned Program**

Product Development	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	0.000	9.702	0.000	
RDT&E Articles Quantity				

**Product Development:**

Design and prototyping of critical technology components for demonstration and evaluation.


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R-1 SHOPPING LIST - Item No. 36

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 64 of 98)



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>																																					
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME <b>Surface &amp; Shallow Water MCM, 060325N</b>	PROJECT NUMBER AND NAME 3102 Low Frequency Broadband																																						
<p><b>(U) C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 10%; text-align: right;">FY 2005</th> <th style="width: 10%; text-align: right;">FY 2006</th> <th style="width: 10%; text-align: right;">FY 2007</th> </tr> </thead> <tbody> <tr> <td>(U) Funding:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>FY06 President's Budget Controls:</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">9.850</td> <td style="text-align: right;">15.470</td> </tr> <tr> <td>FY07 President's Budget Controls:</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">9.702</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">-0.148</td> <td style="text-align: right; border-top: 1px solid black;">-15.470</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>Programmatic Changes</td> <td></td> <td></td> <td style="text-align: right;">-15.470</td> </tr> <tr> <td>Other General Provisions</td> <td></td> <td style="text-align: right;">-0.148</td> <td></td> </tr> <tr> <td>Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">-0.148</td> <td style="text-align: right; border-top: 1px solid black;">-15.470</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) Schedule: Not Applicable</p> <p style="margin-top: 20px;">(U) Technical: Not Applicable</p>						FY 2005	FY 2006	FY 2007	(U) Funding:				FY06 President's Budget Controls:	0.000	9.850	15.470	FY07 President's Budget Controls:	0.000	9.702	0.000	Total Adjustments	0.000	-0.148	-15.470	Summary of Adjustments				Programmatic Changes			-15.470	Other General Provisions		-0.148		Subtotal	0.000	-0.148	-15.470
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R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2006</b>																						
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM			PROJECT NUMBER AND NAME 3102 Low Frequency Broadband																							
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<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>																				
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R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: <b>February 2006</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RD&amp;E, N / BA-4</b>			PROGRAM ELEMENT 0603502N, Surface and Shallow Water MCM			PROJECT NUMBER AND NAME 3102 Low Frequency Broadband								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date			Cost to Complete	Total Cost	Target Value of Contract
ADM Hardware Development		Contractors - Two (TBD)				5.102	03/06						5.102	
Subtotal Product Development			0.000	0.000		5.102							5.102	
Remarks:														
Software Development		Contractors (TBD)				2.350	03/06						2.350	
Integrated Logistics Support	WX	NSWC, Panama, City, FL				0.250							0.250	
Subtotal Support			0.000	0.000		2.600							2.600	

R-1 SHOPPING LIST - Item No. 36

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Exhibit R-2, RD&E Budget Item Justification  
(Exhibit R-2, page 67 of 98)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2006</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT 0603502N, Surface and Shallow Water MCM			PROJECT NUMBER AND NAME 3102 Low Frequency Broadband								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date		FY 07	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NSWC:PC, NRL				0.550	03/06						0.550	N/A
														N/A
														N/A
Subtotal T&E			0.000	0.000		0.550		0.000		0.000			0.550	
Remarks:														
Government Engineering Support	WX	NSWC, Panama, City, FL				0.650							0.650	N/A
Program Management Support	Various	Various				0.800							0.800	N/A
														N/A
														N/A
														N/A
Subtotal Management			0.000	0.000		1.450		0.000		0.000			1.450	
Remarks:														
Total Cost			0.000	0.000		9.702		0.000		0.000			9.702	
Remarks:														

R-1 SHOPPING LIST - Item No. 36

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2, page 68 of 98)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile																				DATE: February 2006													
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4								PROGRAM ELEMENT NAME AND NUMBER 0603502N, Surface & Shallow Water MCM								PROJECT NAME AND NUMBER 3102 Low Frequency Broadband																	
LOW FREQUENCY BROADBAND PROGRAM SCHEDULE																																	
		FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ADM Contract Award Critical Technology Development						△ <input type="text"/>																											

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 69 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 70 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification									DATE: <b>February 2006</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM				PROJECT NUMBER AND NAME 3123 SMCM UUV					
COST (\$ in Millions)	Prior Years Cost	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011		Cost to Complete	Total Program
Project Cost	<b>0.000</b>	<b>0.000</b>	<b>1.047</b>	<b>11.222</b>	<b>7.333</b>	<b>12.443</b>	<b>24.049</b>	<b>20.131</b>		<b>Continuing</b>	<b>Continuing</b>
RDT&E Articles Qty											

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

The Surface Mine Countermeasure Unmanned Undersea Vehicle (SMCM UUV) provides for development of Unmanned Underwater Vehicles to support dedicated mine countermeasure operations. The UUV systems must have a small deployment footprint for rapid employment aboard various SMCM platforms. Equipment includes Launch Recovery Sub-Systems and associated systems support equipment.

\*This effort was previously budgeted for in PE 0603654N, project 4024. The project was moved to 0603502N so that all of the UUV funding would fall into one R&D PE. In addition, funding from PE 0603502N 3102 was transferred to this line to fund an integrated UUV system vice a standalone sensor project.

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 71 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM		PROJECT NUMBER AND NAME 3123 SMCM UUV	
<b>(U) B. Accomplishments/Planned Program</b>					
SMCM UUV		FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost		0.000	1.047	11.222	
RDT&E Articles Quantity					
<div style="border: 1px solid black; padding: 10px; min-height: 60px;"> <p>Demonstrate operation of a UUV-based capability package for standoff, multiple MCM operations from surface MCM platforms (e.g., MHC, HSV, etc.) Starting in FY06 effort was moved from Program Element 0603654N, Project 4024. The funding was moved to 0603502N so that all of the UUV funding would fall into one R&amp;D PE.</p> </div>					
<div style="border: 1px solid black; height: 70px; width: 100%;"></div>					
<div style="border: 1px solid black; height: 50px; width: 100%;"></div>					
<b>Total</b>		0.000	1.047	11.222	

R-1 SHOPPING LIST - Item No.

36

UNCLASSIFIED

Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2, page 72 of 98)



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>																																																	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME <b>Surface &amp; Shallow Water MCM, 060325N</b>	PROJECT NUMBER AND NAME 3123 SMCM UUV																																																		
<p><b>(U) C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: right;">FY 2005</th> <th style="text-align: right;">FY 2006</th> <th style="text-align: right;">FY 2007</th> </tr> </thead> <tbody> <tr> <td>(U) Funding:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>FY06 President's Budget Controls:</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">1.063</td> <td style="text-align: right;">1.761</td> </tr> <tr> <td>FY07 President's Budget Controls:</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">1.047</td> <td style="text-align: right;">11.222</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">-0.016</td> <td style="text-align: right; border-top: 1px solid black;">9.461</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>Pay Rates</td> <td></td> <td></td> <td style="text-align: right;">0.016</td> </tr> <tr> <td>Inflation</td> <td></td> <td></td> <td style="text-align: right;">0.052</td> </tr> <tr> <td>Programmatic Changes</td> <td></td> <td></td> <td style="text-align: right;">9.419</td> </tr> <tr> <td>Warfare Center Rates</td> <td></td> <td></td> <td style="text-align: right;">-0.026</td> </tr> <tr> <td>Other General Provisions</td> <td></td> <td style="text-align: right;">-0.016</td> <td></td> </tr> <tr> <td>Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">-0.016</td> <td style="text-align: right; border-top: 1px solid black;">9.461</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) Schedule: Not Applicable</p> <p style="margin-top: 20px;">(U) Technical: Not Applicable</p>						FY 2005	FY 2006	FY 2007	(U) Funding:				FY06 President's Budget Controls:	0.000	1.063	1.761	FY07 President's Budget Controls:	0.000	1.047	11.222	Total Adjustments	0.000	-0.016	9.461	Summary of Adjustments				Pay Rates			0.016	Inflation			0.052	Programmatic Changes			9.419	Warfare Center Rates			-0.026	Other General Provisions		-0.016		Subtotal	0.000	-0.016	9.461
	FY 2005	FY 2006	FY 2007																																																	
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R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM			PROJECT NUMBER AND NAME 3123 SMCM UUV		

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
<p><b>(U) E. ACQUISITION STRATEGY:</b></p> <p>The SMCM UUV Analysis of Alternatives (AOA) will complete in Apr 06, resulting in a draft Capability Description Document by the end of FY06. The SMCM UUV program will procure 3 dual frequency Synthetic Aperture Sonar User Operational Evaluation Systems of 2 vehicles each in FY06 with delivery in early FY08 for continued Fleet experimentation. An acquisition program will be initiated in FY08 to procure Unmanned Undersea Vehicles equipped with Low Frequency Broadband sonar, culminating in a Milestone C in FY11.</p>									

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2, page 74 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)												DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>				PROGRAM ELEMENT 0603502N, Surface & Shallow Water MCM				PROJECT NUMBER AND NAME 3123 SMCM UUV							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date			Cost to Complete	Total Cost	Target Value of Contract	
Dual Freq SAS Hardware Development	CPAF	TBD	0.000					8.153	11/06			Continuing	Continuing		
Software Development	WX	NSWC Panama City, FL	0.000			0.584	5/06	0.450	11/06			Continuing	Continuing		
SMCM UUV Contractors	CPFF	Multiple	0.000			0.041	5/06	0.091	11/06						
Subtotal Product Development			0.000	0.000		0.625		8.694				0.000	9.319		
Engineering Support	WX	NSWC Panama City, FL				0.113	4/06	1.807	11/06						
Engineering Support	WX	NUWC Newport, RI						0.301	11/06						
Subtotal Support						0.113		2.108				0.000	2.221		
Remarks:															

# UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)												DATE: <b>February 2006</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT 0603502N, Surface & Shallow Water MCM				PROJECT NUMBER AND NAME 3123 SMCM UUV							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date			Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	CMWC, Corpus Christi, TX	0.000			0.120	4/06	0.120	11/06			Continuing	Continuing	
Subtotal T&E			0.000	0.000		0.120		0.120				0.000	0.240	
Remarks:														
Program Management Support	CPFF	Anteon, Wash, DC						0.120	11/06			Continuing	Continuing	
Government Engineering Support	CPFF	EDO, Corpus Christi, TX				0.189	4/06	0.180	11/06			Continuing	Continuing	
Subtotal Management			0.000			0.189		0.300				0.000	0.489	
Remarks:														
Total Cost			0.000	0.000		1.047		11.222		0.000		0.000	12.269	
Remarks:														

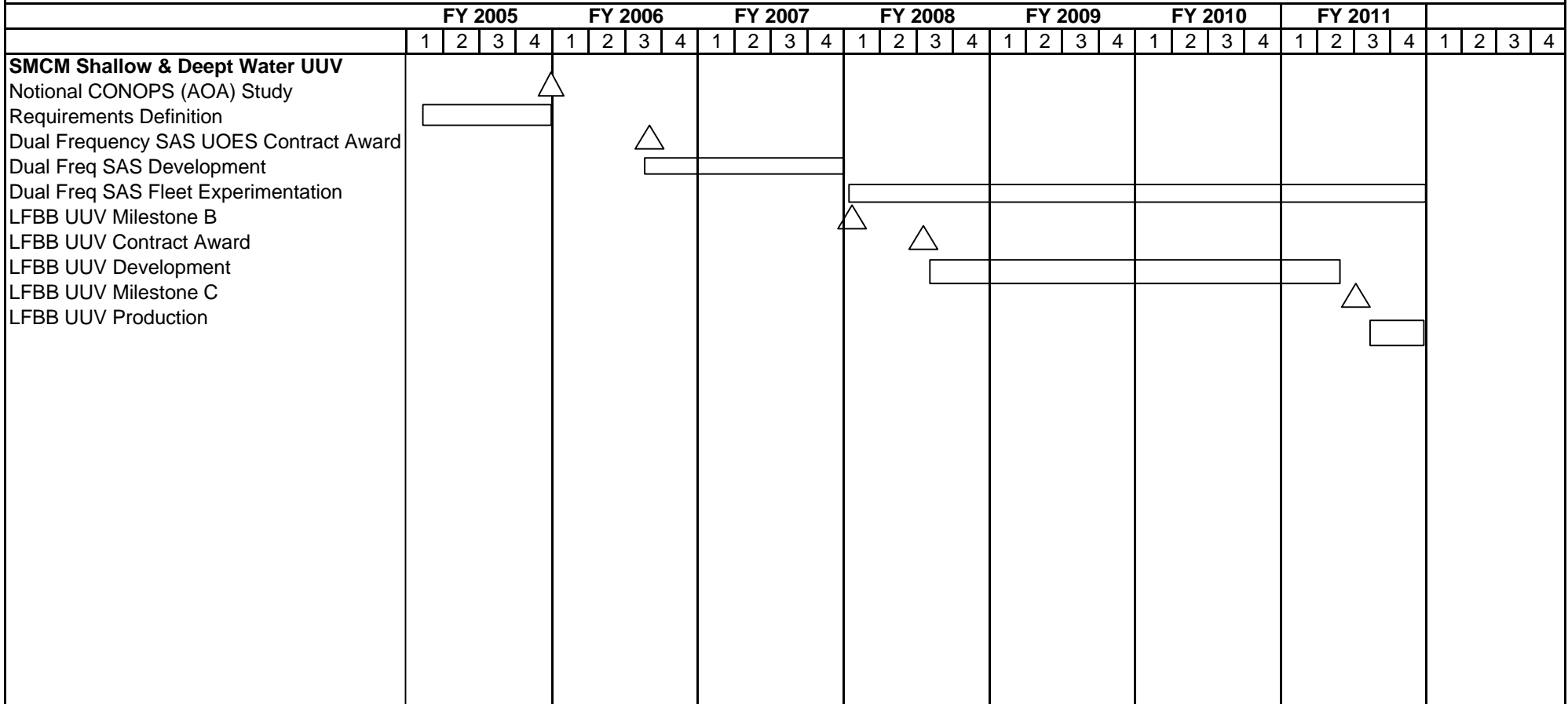
# UNCLASSIFIED

CLASSIFICATION:

**UNCLASSIFIED**

EXHIBIT R-4, Schedule Profile

DATE:

**February 2006**APPROPRIATION/BUDGET ACTIVITY  
**RDT&E, N/BA-4**PROGRAM ELEMENT NAME AND  
**0603502N, Surface & Shallow Wat**PROJECT NAME AND NUMBER  
3123 SMCM UUV**SMCM UUV Program Schedule**

R-1 SHOPPING LIST - ITEM NO.

36

**UNCLASSIFIED****Exhibit R-2, RD TEN Budget Item Justification**

(Exhibit R-2, page 77 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 78 of 98)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM					4025 Expendable Mine Neutralization System					
COST (\$ in Millions)	Prior Years Cost		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Total Program
Project Cost	0.000		1.825	8.334	13.760	0.000	0.000	0.000	0.000	0.000	23.919
RDT&E Articles Qty											0

### (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Expendable Mine Neutralization System (EMNS) is a replacement to the existing AN/SLQ-48 Mine Neutralization System (MNS). The current program replaces the MNS with EMNS on the 14 MCM Avenger Class Ships. EMNS will leverage off of on-going efforts in the Airborne Mine Countermeasures Program to develop an Airborne Mine Neutralization System (AMNS).

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>													
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 4025 Expendable Mine Neutralization System														
<b>(U) B. Accomplishments/Planned Program</b>																
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;">Product Development</th><th style="width: 10%;">FY 05</th><th style="width: 10%;">FY 06</th><th style="width: 10%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.203</td><td style="text-align: center;">6.326</td><td style="text-align: center;">4.730</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></tbody></table>					Product Development	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	1.203	6.326	4.730	RDT&E Articles Quantity			
Product Development	FY 05	FY 06	FY 07													
Accomplishments/Effort/Subtotal Cost	1.203	6.326	4.730													
RDT&E Articles Quantity																
<div style="border: 1px solid black; min-height: 150px; margin-top: 10px;"></div>																
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;">Support</th><th style="width: 10%;">FY 05</th><th style="width: 10%;">FY 06</th><th style="width: 10%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.092</td><td style="text-align: center;">1.000</td><td style="text-align: center;">0.900</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></tbody></table>					Support	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	0.092	1.000	0.900	RDT&E Articles Quantity			
Support	FY 05	FY 06	FY 07													
Accomplishments/Effort/Subtotal Cost	0.092	1.000	0.900													
RDT&E Articles Quantity																
<div style="border: 1px solid black; min-height: 100px; margin-top: 10px;"></div>																

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME 4025 Expendable Mine Neutralization System		
(U) B. Accomplishments/Planned Program				
<b>Test and Evaluation</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.100	0.578	7.700
RDT&E Articles Quantity				
<b>Test and Evaluation:</b> EMNS developmental testing including environmental and shock testing, safety testing, developmental and operational testing. Develop Test and Evaluation Master Plan (TEMP) and test reports.				
<b>Management</b>		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.430	0.430	0.430
RDT&E Articles Quantity				
<b>Management:</b> Provide program management support and travel for EMNS.				
<b>Total</b>		1.825	8.334	13.760

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: <b>February 2006</b>																																				
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-4</b>		R-1 ITEM NOMENCLATURE 4025 Expendable Mine Neutralization System																																				
<p><b>(U) C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">(U) C. PROGRAM CHANGE SUMMARY:</th> <th style="text-align: right; width: 15%;">FY 2005</th> <th style="text-align: right; width: 15%;">FY 2006</th> <th style="text-align: right; width: 15%;">FY 2007</th> </tr> </thead> <tbody> <tr> <td>FY06 President's Budget</td> <td style="text-align: right;">2.155</td> <td style="text-align: right;">11.506</td> <td style="text-align: right;">14.030</td> </tr> <tr> <td>FY07 President's Budget</td> <td style="text-align: right;">1.825</td> <td style="text-align: right;">8.334</td> <td style="text-align: right;">13.760</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">(0.330)</td> <td style="text-align: right; border-top: 1px solid black;">(3.172)</td> <td style="text-align: right; border-top: 1px solid black;">(0.270)</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments:</td> </tr> <tr> <td>Inflation</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.062</td> </tr> <tr> <td>Pay Rates</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.020</td> </tr> <tr> <td>Programmatic Changes</td> <td style="text-align: right; border-top: 1px solid black;">(0.330)</td> <td style="text-align: right; border-top: 1px solid black;">(3.172)</td> <td style="text-align: right; border-top: 1px solid black;">(0.352)</td> </tr> <tr> <td>Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">(0.330)</td> <td style="text-align: right; border-top: 1px solid black;">(3.172)</td> <td style="text-align: right; border-top: 1px solid black;">(0.270)</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Note: FY06 - \$3M Congressional reduction for late contract award.</p> <p style="margin-top: 40px;">(U) Schedule: Not Applicable</p> <p style="margin-top: 40px;">(U) Technical: Not Applicable</p>			(U) C. PROGRAM CHANGE SUMMARY:	FY 2005	FY 2006	FY 2007	FY06 President's Budget	2.155	11.506	14.030	FY07 President's Budget	1.825	8.334	13.760	Total Adjustments	(0.330)	(3.172)	(0.270)	Summary of Adjustments:				Inflation	0.000	0.000	0.062	Pay Rates	0.000	0.000	0.020	Programmatic Changes	(0.330)	(3.172)	(0.352)	Subtotal	(0.330)	(3.172)	(0.270)
(U) C. PROGRAM CHANGE SUMMARY:	FY 2005	FY 2006	FY 2007																																			
FY06 President's Budget	2.155	11.506	14.030																																			
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Subtotal	(0.330)	(3.172)	(0.270)																																			

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM		PROJECT NUMBER AND NAME 4025 Expendable Mine Neutralization System			

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>

**(U) E. ACQUISITION STRATEGY:**

The Airborne Mine Countermeasures Program is developing a Rapid Deployment Capability (RDC) system with the SEAFOX neutralizer for the MH-53E helicopter and a traditional (acquisition program) system with the Archerfish neutralizer for the MH-60s helicopter. Based on Surface Ship requirements, one of these two variants will likely be selected for use on the MCM Avenger Class Ships. The acquisition strategy will be full and open competition for system development, likely using one of the neutralizer variants.

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

**UNCLASSIFIED**

**Exhibit R-2, RDTEB Budget Item Justification**  
(Exhibit R-2, page 84 of 98)

R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2006</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RD&amp;E, N / BA-4</b>			PROGRAM ELEMENT 0603502N, Surface and Shallow Water MCM			PROJECT NUMBER AND NAME 4025 Expendable Mine Neutralization System								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Develop TEMP	WX	NSWC, Panama City, FL				0.100	10/04	0.100	10/05			0.000	0.200	N/A
Environmental and Shock Testing	WX	NSWC, Panama City, FL						0.240	10/05	0.500	10/06	0.000	0.740	N/A
CT/DT/OT	CPIF	TBD						0.100	10/05	1.470	10/06	0.000	1.570	N/A
CT/DT/OT	WX	NSWC, Panama City, FL								4.230	10/06	0.000	4.230	
Safety Testing	WX	NSWC, Panama City, FL						0.138	10/05	1.500	10/06	0.000	1.638	
Subtotal T&E			0.000			0.100		0.578		7.700		0.000	8.378	
Remarks:														
Program Mangement Support	CPFF	CACI	0.000			0.150	10/04	0.150	10/05	0.150	10/06	0.000	0.450	N/A
Travel	Various	NAVSEA	0.000			0.050	10/04	0.050	10/05	0.050	10/06	0.000	0.150	N/A
Government Engineering Support	WX	NSWC, Panama City, FL				0.230	10/04	0.230	10/05	0.230	10/06	0.000	0.690	N/A
														N/A
														N/A
Subtotal Management			0.000			0.430		0.430		0.430		0.000	1.290	
Remarks:														
Total Cost			0.000			1.825		8.334		13.760		0.000	23.919	
Remarks:														

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RD&E Budget Item Justification  
(Exhibit R-2, page 86 of 98)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile																DATE:								February 2006								
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NAME AND NUMBER										PROJECT NAME AND NUMBER																	
RDT&E, N/BA-4					0603502N, Surface & Shallow Water MCM										4025 Expendable Mine Neutralization System																	
EMNS PROGRAM SCHEDULE																																
					FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Contract Award									△																							
HW/SW Design and Development									□																							
Preliminary Design Review									△																							
Critical Design Review									△																							
Contractor / Development Testing									□																							
EDM Install / Checkout													△																			
TECHEVAL/OPEVAL																	□															
Milestone C																					△											

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 87 of 98)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 36

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 88 of 98)



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM					9513 Battlespace Preparation Autonomous Undersea Vehicle (BPAUV)					
COST (\$ in Millions)	Prior Years Cost	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011		Cost to Complete	Total Program
Project Cost	0.000	0.964*	0.000	0.000	0.000	0.000	0.000	0.000			0.964
RDT&E Articles Qty											

### (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

\* Congressional plus up of the Battlespace Preparation Autonomous Undersea Vehicle (BPAUV) is an unmanned system capable of minehunting and oceanographic data gathering. The BPAUV will be launched and recovered from Littoral Combat Ship (LCS) Flight 0. The Congressional plus up partially funds the development of an engineering development system. BPAUV will be partially funded via the LCS mission module funding.

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE: <b>February 2006</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM		PROJECT NUMBER AND NAME 9513 BPAUV																
<b>(U) B. Accomplishments/Planned Program</b>																				
BPAUV	FY 05	FY 06	FY 07																	
Accomplishments/Effort/Subtotal Cost	0.964*	0.000	0.000																	
RDT&E Articles Quantity																				
<div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div>																				
<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td></tr> <tr><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td></tr> <tr><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td></tr> </table>																				
<div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div>																				
<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td></tr> <tr><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td></tr> <tr><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td><td style="height: 15px;"></td></tr> </table>																				
<div style="border: 1px solid black; height: 60px; margin-top: 10px;"></div>																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Total</td> <td style="width: 15%;">0.964</td> <td style="width: 15%;">0.000</td> <td style="width: 15%;">0.000</td> <td style="width: 30%;"></td> </tr> </table>						Total	0.964	0.000	0.000											
Total	0.964	0.000	0.000																	

R-1 SHOPPING LIST - Item No.

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UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2006</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>	PROGRAM ELEMENT NUMBER AND NAME <b>Surface &amp; Shallow Water MCM, 060325N</b>	PROJECT NUMBER AND NAME 9513 BPAUV

**(U) C. PROGRAM CHANGE SUMMARY:**

	FY 2005	FY 2006	FY 2007
(U) Funding:			
FY06 President's Controls:	0.991	0.000	0.000
FY07 DON Controls:	0.964	0.000	0.000
Total Adjustments	-0.027	0.000	0.000
Summary of Adjustments			
Other General Provisions	-0.027		
Subtotal	-0.027	0.000	0.000

(U) Schedule:  
Not Applicable

(U) Technical:  
Not Applicable

R-1 SHOPPING LIST - Item No. 36

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# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2006</b>																					
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM			PROJECT NUMBER AND NAME 9513 BPAUV																						
<p><b>(U) D. OTHER PROGRAM FUNDING SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 35%;"><u>Line Item No. &amp; Name</u></th> <th style="text-align: center; width: 8%;"><u>FY 2005</u></th> <th style="text-align: center; width: 8%;"><u>FY 2006</u></th> <th style="text-align: center; width: 8%;"><u>FY 2007</u></th> <th style="text-align: center; width: 8%;"><u>FY 2008</u></th> <th style="text-align: center; width: 8%;"><u>FY 2009</u></th> <th style="text-align: center; width: 8%;"><u>FY 2010</u></th> <th style="text-align: center; width: 8%;"><u>FY 2011</u></th> <th style="text-align: center; width: 10%;"><u>To Complete</u></th> <th style="text-align: center; width: 10%;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td style="padding-top: 10px;">BPAUV 0603581N/14KB - RDT&amp;E</td> <td style="text-align: center; vertical-align: bottom;">4.000</td> <td style="text-align: center; vertical-align: bottom;">2.700</td> <td style="text-align: center; vertical-align: bottom;">2.200</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p style="margin-top: 20px;"><b>(U) E. ACQUISITION STRATEGY: *</b></p> <p style="margin-left: 20px;">An engineering development system Battlespace Preparation Autonomous Undersea Vehicles (BPAUV) will be procured for LCS Flight 0 experimentation.</p>									<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>	BPAUV 0603581N/14KB - RDT&E	4.000	2.700	2.200						
<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>																			
BPAUV 0603581N/14KB - RDT&E	4.000	2.700	2.200																									

R-1 SHOPPING LIST - Item No. 36

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)												DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>				PROGRAM ELEMENT 0603502N, Surface & Shallow Water MCM				PROJECT NUMBER AND NAME 9513 BPAUV							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date			Cost to Complete	Total Cost	Target Value of Contract	
BPAUV - Primary Hardware development	Contract	Bluefin	0.000	0.964	09/05								0.964		
Subtotal Product Development			0.000	0.964		0.000		0.000				0.000	0.964		
Remarks: FY05 BPAUV Congressional add.															
Program Management Support															
Program Management Support															
Training Development															
Integrated Logistics Support															
Configuration Management															
Technical Data															
GFE															
Award Fees															
Subtotal Support			0.000			0.000		0.000				0.000	0.000		
Remarks:															

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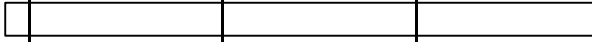
CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)												DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>			PROGRAM ELEMENT 0603502N, Surface & Shallow Water MCM				PROJECT NUMBER AND NAME 9513 BPAUV								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date			Cost to Complete	Total Cost	Target Value of Contract	
Developmental Test & Evaluation															
Operational Test & Evaluation															
Subtotal T&E			0.000	0.000		0.000		0.000				0.000	0.000		
Remarks:															
Program Management Support															
Miscellaneous															
Subtotal Management			0.000	0.000		0.000		0.000				0.000	0.000		
Remarks:															
Total Cost			0.000	0.964		0.000		0.000				0.000	0.964		
Remarks:															

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CLASSIFICATION:

**UNCLASSIFIED**

EXHIBIT R-4, Schedule Profile																DATE: <b>February 2006</b>																				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N/BA-4</b>				PROGRAM ELEMENT NAME AND NUMBER <b>0603502N, Surface &amp; Shallow Water MCM</b>												PROJECT NAME AND NUMBER 9513 BPAUV																				
<b>BPAUV Program Schedule</b>																																				
FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011												
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>BPAUV</b> Development Contract Award BPAUV Development																																				
																																				

R-1 SHOPPING LIST - ITEM NO.

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 95 of 98)

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 96 of 98)

R-1 SHOPPING LIST - Item No. 36



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification									DATE: <b>February 2006</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-4</b>		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM				PROJECT NUMBER AND NAME 9999 Congressional Adds					
COST (\$ in Millions)	Prior Years Cost	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011		Cost to Complete	Total Program
Project Cost	<b>0.000</b>	<b>0.000</b>	<b>1.400</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>			<b>1.400</b>
RDT&E Articles Qty											

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

Congressional plus-up. - Investigate development of an AN/AQS-14, AN/AQS-24 and AN/AQS-20A sensor training module for a LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).

R-1 SHOPPING LIST - Item No. 36

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 97 of 98)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA -4</b>	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM	PROJECT NUMBER AND NAME 9999 Congressional Adds		
<b>B. Accomplishments/Planned Program</b>				
		FY 05	FY 06	FY 07
9179		0.000	1.400	0.000
Surface Navy Integrated Undersea Tactical Technology				
<div>Congressional plus-up. - Investigate development of an AN/AQS-14, AN/AQS-24 and AN/AQS-20A sensor training module for a LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).</div>				